

APPLICATIONS FOR ADMISSION AND FOR TRANSFER

The Constitution provides that the Board of Direction shall elect or reject all applicants for *Admission* or for *Transfer*, and, in order to determine justly the eligibility of each candidate, the Board must depend largely upon the Membership for information.

This list is issued to members in every grade for the purpose of securing all such available information, and every member is urged to scan carefully each monthly list of candidates and to furnish the Board with data in regard to any applicant which may aid in determining his eligibility. It is the *Duty* of all *Members* to the *Profession* to assist the Board in this manner.

It is especially urged, in communications concerning applicants, that errors in the record be pointed out and a *Definite Recommendation as to the Proper Grading in Each Case* be given, inasmuch as the grading must be based upon the opinions of those who know the applicant personally, as well as upon the nature and extent of his professional experience. If facts exist derogatory to the personal character or to the professional reputation of an applicant, they should be promptly communicated to the Board. *Communications Relating to Applicants are considered by the Board as Strictly Confidential.*

The Board of Direction will not consider the applications herein contained from residents of North America until the expiration of thirty (30) days, and from non-residents of North America until the expiration of ninety (90) days from March 1, 1929.

MINIMUM REQUIREMENTS FOR ADMISSION

Grade	General Requirement	Age	Length of Active Practice	Responsible charge of work
Member	Qualified to design as well as to direct work	32 years	12 years*	5 years
Associate Member	Qualified to direct work	25 years	8 years*	1 year
Junior	Qualified for sub-professional work	18 years†	4 years*	
Affiliate	Qualified by scientific acquirements or practical experience to co-operate with engineers			
Fellow	Contributor to the permanent funds of the Society			

* Graduation from a school of engineering of recognized reputation is equivalent to 4 years' active practice.

† Membership ceases at age of 32 unless transferred to higher grade.

LIST OF APPLICANTS.

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The fact that applicants give the names of certain members as references does not necessarily mean that such members endorse.

The number in the center above each record indicates the serial number of the applicant for the current year, and that at the left the district in which he resides.

The abbreviations in *Italics* represent, respectively, *TT*, Total Time; *SP*, Sub-Professional Work; *P*, Professional Work; *RC*, Responsible Charge; *D*, Design. The figure for Total Time is determined by adding one-half the time spent in Sub-Professional Work to the time spent in Professional Work. The figures showing the amount of time spent in Responsible Charge and on Design are the estimate of the Applicant. The allowance of four years for graduation or of one-half of a year for each academic year successfully completed in an engineering college without graduation is included in Total Time and Professional Work.

FOR ADMISSION

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(13) **AEPPLI, ERNEST**, 1241 Willard St., San Francisco, Cal. (Age 32. Born Schwamendingen, Zurich, Switzerland.) 1921 C. E., State Pol. Univ., Zurich, Switzerland. *TT* 4: P 4. Jan. to July 1922 Structural Draftsman with H. D. Dewell, Cons. Engr., San Francisco, Cal. *TT* 0.3: *SP* 0.3. Aug. 1922 to March 1923 Draftsman, Rodman, testing concrete, Copco Dam development, California Oregon Power Co., Medford, Ore. *TT* 0.3: *SP* 0.3. April to July 1923 Structural Draftsman and Designer for Felix Spitzer & Couchot, Cons. Engrs., San Francisco. *TT* 0.2: *SP* 0.1: *P* 0.1. Aug. 1923 to Oct. 1926 Structural Designer successively with H. H. Winner Co., Archts., in charge of designing in structural steel and reinforced concrete (1 year) L. H. Nishkian, and Felix Spitzer, Cons. Engrs., and (1926) with E. W. Cannon, Archt., in charge of designing work on baby hospital, Oakland, Cal. *TT* 3.3: *P* 3.3: *RC* 3.3: *D* 3.3. Oct. 1926 to March 1927 Designer of foundations for turbines, Clines Canyon project, Thebo, Starr & Anderton, Engrs., San Francisco. *TT* 0.5: *P* 0.5: *RC* 0.5: *D* 0.5. Jan. to April 1928 with E. Gull, Archt., Zurich, Switzerland, in charge design of 6-story reinforced concrete garage and repair shop. *TT* 0.3: *P* 0.3: *RC* 0.3: *D* 0.3. Sept. 1928 to date in charge of structural design, H. H. Winner & Co., San Francisco. *TT* 0.3: *P* 0.3: *RC* 0.3: *D* 0.3. *TT* 9.2: *SP* 0.7: *P* 8.5: *RC* 4.4: *D* 4.5. Refers to H. D. Dewell, W. B. McMillan, L. H. Nishkian, V. H. Poss, H. Schorer, F. H. Spitzer, J. C. van der May.

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(1) **AGOSTO ABADIA, MANUEL**, P. O. Box 151, San Juan, Porto Rico. (Age 41. Born San Juan, Porto Rico.) 1914 B. S. in Civ. Eng. and B. Sc., Howard Univ. School of Applied Sci., Washington, D. C. July 1915 to June 1921 with Commr. of Interior and Chf. of Public Works as Inspector of building construction, on design and construction of streets and pavements, supervision of reservoir construction and sewers and water-works extensions. *TT* 3.9: *SP* 2: *P* 1.9: *RC* 1: *D* 0.9. June 1921 to May 1925 with Commr. of Interior for Govt. of Porto Rico on road location and relocation, layout and inspection of sewer construction, design and construction of streets, pavements and park. *TT* 3.9: *P* 3.9: *RC* 1. July 1926 to Nov. 1928 with Chf. Engr. and Director of Public Works, San Juan, Porto Rico, as Asst. Engr. in charge of construction of new water-works for city (\$300 000); also other design and construction on this work. *TT* 2.3: *P* 2.3: *RC* 2.3: *D* 0.2. *TT* 10.2: *SP* 2: *P* 8.2: *RC* 4.3: *D* 1.1. Refers to E. Baez Rodriguez, J. V. Davila, M. V. Domenech, F. Fortuno-Selles, E. Totti y Torres.

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(1) **BAFUNDO, ROCCO DANIEL**, 38 Edgewood Park, New Rochelle, N. Y. (Age 25. Born Avigliano Potenza, Italy.) 1928 B. S. in C. E., Cooper Union Night School. *TT* 4: *P* 4. May to Nov. 1926 Transitman, Draftsman and Computer with Kamp & Nolte, Surveyor, on subdivision, etc. Nov. 1926 to April 1927 Transitman, Draftsman, Computer, Chf. of Party and Inspector, on road construction, Westchester County Park Comm. April to Dec. 1927

Inspector on street, sidewalk, sewer, etc., Transitman, Computer and Draftsman with D. G. Nolte, Village Engr., etc. June to Oct. 1928 Chf. of Party and Asst. in charge of road construction, with James F. Tuthill, Brewster, N. Y. *TT 0.3: SP 0.3.* Oct to Nov. 1928 Transitman and Draftsman with C. MacCallum, New York City, on sewer surveys, profiles, etc., designed small sewer line. Nov. 1928 to date Transitman, Rodman and Chainman, Port of New York Authority, on line, grades, cross-sections, setting steel, etc. *TT 0.2: SP 0.2. TT 4.5: SP 0.2: P 4.3.* Refers to F. E. Cudworth, F. E. Foss, G. Morrison.

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(1) **BARKAN, LOUIS**, 1171 East Thirty-Second St., Brooklyn, N. Y. (Age 24. Born Suvalki, Russia.) 1925 B. S. and 1928 C. E., Coll. of City of N. Y. *TT 4: P 4.* Sept. 1926 to date Engr., Foreman and Supt. with Spencer, White & Prentiss, Engrs. and Contrs., New York City. *TT 2.3: P 2.3: RC 1: D 0.3. TT 6.3: P 6.3: RC 1: D 0.3.* Refers to H. T. Immerman, F. O. X. McLoughlin, E. A. Prentiss, Jr., C. B. Spencer, L. White.

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(9) **BARNARD, HAWLEY NEIL**, 313 Dreier Boulevard, Evansville, Ind. (Age 30. Born Fremont, Nebr.) 1922 B. Sc. in C. E., Univ. of Nebr. *TT 4: P 4.* Summer 1919 Rodman and Paving Inspector, and June to Sept. 1920 Instrumentman, City of Superior, Nebr. May to June 1920 Levelman on irrigation project, with Kimball & Kimball, Engrs., Cody, Wyo. July to Aug. 1922 Inspector, asphalt pavements, Western Laboratories, Lincoln, Nebr. *TT 0.2: P 0.2.* Sept. 1922 to March 1923 Asst. to Office Engr., U. S. Reclamation Service, Black Canyon Dam, on design and construction of construction plant. *TT 0.5: P 0.5.* March 1923 to date with Commonwealth Power Corporation (Stevens & Wood, Inc.), as follows: March 1923 to May 1926 Asst. to and Res. Engr., Saginaw River Station, Consumers Power Co., Saginaw, Mich., responsible for interpretation of specifications, plans and accuracy of work, and later design and purchase of equipment for this plant and Saginaw heating plant; May 1926 to July 1927 Res. Engr., Mad River Plant, Ohio Edison Co., Springfield, Ohio, responsible for interpretation of plans, specifications, accuracy and layout of work; July to Oct. 1927 Res. Engr. and Constr. Supt., steam-heating plant, Akron (Ohio) Steam Heating Co., in charge of construction (after plant was about one-half completed); Nov. 1927 to June 1928 on power plant layout and design, writing specifications and contracts for building construction and equipment; since June 1928 Res. Engr., Ohio River Station, Southern Indiana Gas & Elec. Co., Evansville, Ind., on interpretation of plans and specifications, responsible for accuracy and quality of work. *TT 5.9: P 5.9: RC 2.7: D 0.5. TT 10.6: P 10.6: RC 2.7: D 0.5.* Refers to E. L. Chandler, A. A. Cummins, F. B. Kiel, A. Streiff, W. W. Tefft, N. Van Eenam.

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(13) **BARNES, JOHN GORDON**, 1520 Holly St., Berkeley, Cal. (Age 35. Born Granada, Colo.) 1920 B. S. in C. E., Wash. State Coll. *TT 4: P 4.* Summer 1919 Levelman, Bureau of Public Roads, U. S. Dept. of Agriculture. March 1920 to Dec. 1925 successively Field Engr., Constr. Engr., Draftsman and Asst. Dist. Engr., Standard Oil Co. of California, on survey, maintenance and construction of pipe lines, tanks, wholesale and retail stations and maintenance of motor equipment fleets at Spokane, Wash. (4½ years) and Sacramento, Cal. *TT 4.4: SP 1.4: P 3: RC 3.* May 1926 to date Chf. Inspector, Dept. of Public Works, Berkeley, Cal., in charge of public utility and street-railway paving, trenches and structures on city streets, including water-main installations, also in charge of sidewalk maintenance. *TT 2.5: SP 0.3: P 2.2: RC 2.2. TT 10.9: SP 1.7: P 9.2: RC 5.2.* Refers to H. I. Dygert, A. J. Eddy, S. A. Hart, F. E. Roper, R. U. St. John, C. H. Thomas.

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(12) **BATCHELLER, WILLIS TRYON**, 609 Dexter Horton Bldg., Seattle, Wash. (Age 39. Born Channahon, Ill.) 1911 B. S. in E. E., and 1915 E. E., Univ. of Wash. *TT 4: P 4.* June 1910 to Dec. 1911 Tech. Asst., Elec. Testing Laboratory, Puget Sound Power & Light Co., Seattle, Wash. *TT 0.8: SP 0.8.* 1912 to July 1921 with City of Seattle, until 1916 as Constr. Engr., Lighting Dept., on design and construction of buildings, railway and power substations, etc., then Elec. and Mech. Engr. on investigation of power sites, reports, design, specifications, contracts, hydro-electric and steam-electric plant (3 units, total 50 000 h.p.), Cedar Falls hydro (15 000 h.p.), preliminary studies, plans, Skagit hydro. *TT 9.6: P 9.6: RC 9.6: D 9.6.* Aug. 1921 to Feb. 1922 Cons. Hydro-Elec. Engr., Dept. of Conservation and Development, State of Washington, in charge of field investigations, surveys, diamond drilling, plans, report, pumping and power plant, irrigating Columbia Basin project. *TT 0.6: P 0.6: RC 0.6: D 0.6.* March 1922 to date in private practice on surveys for electrification of Raymond Veneer Co., Olympia Veneer Co., Willapa Lumber Co., Campbell River Mills, Ltd., Wagner Lumber Co.; investigation and report on hydro-electric developments on Pilchuck Creek and on tributaries of Lake Kachees, report on hydraulic mining plant near Yuka, Cal. (1924), investigation and report on dry-rot in warehouse for

Crescent Mfg. Co. (1925), plans for dam and power plant for Western Smelting & Power Co., Cook, Mont., investigations, test borings and report on foundation conditions for a factory at So. Seattle, Water Supply Engr., Town of Richmond Beach (1926); on financing, design and construction of water-supply system, Lake Forest Park, Wash., field investigations, surveys, test pits, diamond drilling, designs for 60 000-h.p. hydro-electric project, Vancouver Island for International Harvester Co., field reconnaissance, preliminary designs of four hydro-electric projects in British Columbia and Alaska and other surveys, investigations, reports, plans, test borings, expert witness, etc. (1927); since 1928 Cons. Engr., Quincy Valley Irrigation Dist., presented brief on Columbia Basin project before House and Senate Irrigation Committees, Washington, D. C.; financing, design, construction water-supply systems, Coupeville, Oak Harbor, Edmonds, Friday Harbor, Wash. TT 6.9: P 6.9: RC 6.9: D 6.9. TT 21.9: SP 0.8: P 21.1: RC 17.1: D 17.1. Refers to T. H. Carver, H. L. Gray, C. R. Moore, O. A. Piper, C. D. Pollock, R. K. Tiffany, W. F. Way.

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(9) **BAUER, ARTHUR ERNEST**, 804 Harries Bldg., Dayton, Ohio. (Age 30. Born Dayton, Ohio.) Sept. 1917 to March 1918 Rodman with P. S. Bookwalter, Dayton, Ohio, on surveys. TT 0.2: SP 0.2. May 1918 to Nov. 1924 Rodman, Instrumentman and (about 6 years) Chf. of Party with K. B. Allen, Engr., Oakwood Village, also County San. Engr., on survey, sewers, water, paving and subdivisions. TT 5.3: SP 1.3: P 4: RC 2. Nov. 1924 to date in private practice, until Feb. 1925 as A. E. Bauer, Civ. Engr. and Surveyor, and since then as Bauer & Bauer, Engrs., Dayton, Ohio; work has covered surveys, topography, subdivisions, developments, landscaping, design, supervision of construction, municipal improvements, reinforced concrete and steel structures. TT 4.3: P 4.3: RC 4.3: D 4.3. TT 9.8: SP 1.5: P 8.3: RC 6.3: D 4.3. Refers to K. B. Allen, G. F. Baker, P. S. Bookwalter, P. E. Borchers, F. J. Cellarius, E. A. Smith, V. C. Smith.

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(15) **BECKER, HARRY VELTMAN**, 2016 West Nineteenth St., Oklahoma City, Okla. (Age 40. Born Ellsworth, Kans.) 1912 B. S., Univ. of Kans. TT 4: P 4. Aug. 1912 to April 1913 Structural Steel Draftsman, Kansas City (Mo.) Structural Steel Co. TT 0.4: SP 0.4. April 1913 to June 1914 Instrumentman and Computer, Aluminum Co. of America, on topographical survey for water power. Aug. 1914 to April 1915 Rodman and Chainman, Santa Fe Ry. Co. TT 0.6: SP 0.6. April 1915 to June 1917 Rodman, Chainman and Computer, Interstate Commerce Comm., on railroad valuation. TT 1.1: SP 1.1. June to Oct. 1917 and April 1919 to June 1920 County Engr., Ellsworth County, Kans., in charge of road and bridge construction and design (\$200 000). TT 1.6: P 1.6: RC 1.6: D 1.6. Oct. 1917 to April 1919 Sergeant, 1st Class, Engrs., U. S. Army. TT 0.8: SP 0.8. Feb. 1922 to May 1923 member of firm, H. G. Olmsted & Co., Cons. Engrs., designed and supervised construction of high line and service lines for electric light and power service for Fairland, Okla. (\$40 000), reservoir and pumping plant for Morris, Okla. (\$60 000) and sanitary and lateral sewers for Shattuck and Waynoka, Okla. (each \$60 000). TT 1.2: P 1.2: RC 1.2: D 1.2. May 1923 to date with Eng. Dept., Oklahoma City, Okla., until March 1924 as Draftsman, then Office Engr., and since May 1928 Asst. City Engr., Oklahoma City, Okla., on design, estimates and specifications and supervising drafting work on plans for paving (about \$1 500 000 annually), sanitary sewers (about \$500 000 annually) and at present for storm and sanitary sewers (\$2 500 000, about \$750 000 expended). TT 5.1: SP 0.4: P 4.7: RC 4.7: D 4.7. TT 15.1: SP 3.6: P 11.5: RC 7.5: D 7.5. Refers to C. E. Bretz, W. C. Burnham, L. M. Bush, V. V. Long, B. S. Myers, W. E. Price, M. J. Reinhart.

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(15) **BECKWITH, HAL ABEEL**, Eagle Pass, Tex. (Age 45. Born Killeen, Tex.) 1911 C. E., Univ. of Tex. TT 4: P 4. June 1908 to Sept. 1909 on construction and operation of ice plant, Ballinger, Tex. TT 0.7: SP 0.7. June 1911 to July 1912 Engr., Harlingen (Tex.) Land & Water Co., on irrigation project (40 000 acres), location and construction of new canals and maintenance and operation of system. TT 1.1: P 1.1: RC 1.1: D 0.5. July 1912 to June 1915 and June to Sept. 1917 in private practice, on construction and maintenance of canals and structures, surveys and subdivision, Lower Rio Grande Valley and (1917) design and construction of streets, walks, curbs and gutters for City of Harlingen. TT 3.1: P 3.1: RC 3.1: D 0.2. June 1915 to June 1917 and April 1918 to June 1919 Engr., Cameron County Water Improvement Dist. No. 1, Harlingen, on design and construction of pumping plants, remodeling and rebuilding canals, flumes, etc., maintenance and operation of irrigation system. TT 3.2: P 3.2: RC 3.2: D 1.4. Oct. 1917 to April 1918 Instructor, Engines Dept., Univ. of Texas, School of Military Aeronautics, Austin, Tex. TT 0.5: P 0.5. June to Sept. 1919 and Feb. 1921 to Aug. 1922 in private engineering practice with A. Tamm, at Harlingen, on maintenance and operation of irrigation system for Cameron County Water Improvement Dist. No. 1, surveys and subdivision, location and construction of canals and laterals, and

(after Feb. 1921) on design and construction of streets, drainage and sewer systems, irrigation work, land surveys and subdivision. *TT 1.5: P 1.5: RC 1.5: D 1.3.* Sept. 1919 to Feb. 1921 Asst. Engr., United West Indies Corporation, Port-au-Prince, Haiti, on irrigation investigation and agricultural engineering. *TT 1.5: P 1.5: RC 1.5: D 0.7.* Aug. 1922 to Jan. 1926 Asst. Engr., Hidalgo County Water Improvement Dist. No. 1, Edinburg, Tex. (38 000-acre irrigation project), valuation of old project, design and construction of remodeled system, pumping plants, canals and drainage. *TT 3.3: P 3.3: RC 3.3: D 1.5.* Jan. 1926 to date Asst. Engr., Maverick County Water Improvement Dist. No. 1, Eagle Pass, Tex. (60 000-acre irrigation project and hydro-electric project), investigation of project and design of system (estimated cost \$6 000 000). *TT 3: P 3: RC 3: D 1. TT 2.2: SP 0.7: P 2.1.3: RC 17.5: D 7.5.* Refers to R. S. Carberry, J. A. Norris, W. L. Rockwell, A. Tamm, W. O. Washington.

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(15) **BELLAMY, EARL DeLAINE**, 520 Anita Ave., Houston, Tex. (Age 24. Born El Oro, Mexico.) June 1923 to Nov. 1925 Rodman and Jun. Engr., City of Corpus Christi, Tex., on surveys, water, sewer, gas, etc., 1 year in charge of gas-distribution construction. *TT 1.4: SP 1: P 0.4.* Jan. 1926 to date Rodman, Instrumentman and Jun. Engr., City of Houston, Tex., on paving. *TT 2.7: SP 0.5: P 2.2: RC 1. TT 4.1: SP 1.5: P 2.6: RC 1.* Refers to G. R. Bringham, C. J. Howard, J. G. McKenzie, J. C. McVea, L. H. Schlom.

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(1) **BENTLEY, WARREN ROBERTSON**, 226 West Seventy-Fifth St., New York City. (Age 24. Born North Tonawanda, N. Y.) 1926 C. E., Cornell Univ. *TT 4: P 4.* Oct. 1926 to March 1927 with New York State Bureau of Highways, Div. 5, Buffalo, N. Y., on surveys for road reconstruction and surveys and designs for grade-crossing eliminations. *TT 0.2: SP 0.2: D 0.2.* March 1927 to date with H. de B. Parsons, Cons. Engr., New York City, on reports, design, supervision and appraisals. *TT 0.9: SP 0.9: D 0.7. TT 5.1: SP 1.1: P 4: D 0.9.* Refers to F. A. Barnes, E. E. Halmos, H. T. Larsen, H. de B. Parsons, S. Wilmot.

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(8) **BERKENBLIT, SAMUEL EDWARDS**, 208 North Wells St., Chicago, Ill. (Age 36. Born Rostov-Don, Russia.) 1912 B. C. E., Cooper Union Inst. *TT 4: P 4.* June 1912 to Jan. 1914 Jun. Asst., Public Service Comm., New York City, line and grade and monthly estimates, subway construction surveys. *TT 0.8: SP 0.8.* Jan. 1914 to March 1916 Eng. Draftsman, New York State Highway Comm., Poughkeepsie, N. Y., on contract drawings and monthly estimates. *TT 1.6: SP 0.6: P 1.* March 1916 to Nov. 1918 Engr. and Estimator, Gen. Contr. & Eng. Co., New York, on design of industrial buildings, docks, viaducts, some field superintendence. *TT 2.7: P 2.7: RC 1.7: D 1.* March 1919 to May 1920 with Lockwood, Greene & Co., Atlanta, Ga., as Designing Engr. on reinforced concrete buildings, factories, hydro-electric plants. *TT 1.1: P 1.1: RC 1.1: D 1.1.* Sept. 1920 to April 1922 Engr. and Estimator, American Tower & Tank Co. (Elgin Sweeper Co.) in charge of fabricating shop, design and fabrication of steel work for buildings, towers, etc. *TT 1.5: P 1.5: RC 1.5: D 1.5.* April 1922 to March 1924 Structural Engr. in Chg., Weary & Alford Co., on design of tall office and bank buildings (fireproof). *TT 2: P 2: D 2.* March 1924 to April 1925 Designing Engr. with Holabird & Roche, Archts., on design of special framing, heavy trusses and checking designs (Tribune Tower, Palmer House). *TT 1: P 1: D 1.* Jan. 1927 to Jan. 1928 Structural Engr. and Archt. in Chg., William G. Woolfolk & Co., in charge of design and supervision of bridges and structures. *TT 1: P 1: RC 1: D 1.* April 1925 to Jan. 1927 and Jan. 1928 to date Cons. Engr., investigation of structures, reports, designing industrial plants, office buildings, apartments, churches, etc., also (since Jan. 1928) on design of pump houses, deep wells, reservoirs, power plants, etc. *TT 2.7: P 2.7: RC 2.7: D 2.7. TT 18.4: SP 1.4: P 17: RC 8: D 9.8.* Refers to J. B. Black, F. E. Brown, J. A. Foulhoux, E. E. R. Tratman, W. G. Woolfolk.

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(1) **BOSWELL, DAVID CHARLES**, Ridgefield Park, N. J. (Age 34. Born New York City.) Licensed Prof. Engr., State of New Jersey. 1911 to 1912 Rodman and Surveyor's Asst. with Samuel J. Shaw, Civ. Engr., Ridgefield Park, N. J. *TT 0.5: SP 0.5.* 1912 to 1915 with Rudolf Schweizer, Civ. Engr., Ridgefield Park, as Surveyor's Asst. and Transitman, also making sketches, tracing and general office work. *TT 1.5: SP 1.5.* 1915 to Jan. 1916 Transitman and Surveyor's Asst. with County Engr., Bergen County, N. J. *TT 0.5: SP 0.5.* Jan. 1916 to April 1917 with County Engr., Red Bank, N. J., as Draftsman, also acting as Designer on highways, small bridge and culverts. *TT 1.2: P 1.2: D 1.2.* April 1917 to May 1924 Res. Engr., New Jersey State Highway Comm., in responsible charge of surveys, design and construction of State highway projects. *TT 7: P 7: RC 7: D 7.* May 1924 to date Town Engr. and Surveyor, also Cons. Highway Engr., in private practice as Engr., Ridgefield Park, and Bergenfield, N. J.; work has covered surveys, sewers, streets and

assessment maps, past year had charge of construction, streets, etc. (about \$1 000 000).
 TT 4.7: P 4.7: RC 4.7: D 4.7. TT 15.5: SP 2.5: P 13: RC 11.7: D 13. Refers to
 R. M. Beck, T. F. Bowe, H. A. Kelly, F. W. Tooker, J. L. Vogel, T. J. Wasser.

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(1) BROWN, J KNOX, 841 Walton Ave., New York City. (Age 23. Born Shushan, N. Y.)
 1926 B. S. in C. E., Clarkson Coll. Tech. TT 4: P 4. June to Sept. 1926 Laborer with
 New York State Engr. and Surveyor on surveys and computations. July 1926–Nov. 1927
 Rodman, Transitman and Inspector, Moffat Tunnel Comm., field and tunnel work, being Repre-
 sentative of Res. Engr. TT 1.3: P 1.3. Feb. 1928 to date Steel Inspector, Port of New York
 Authority, computing and compiling test and shipment records, etc., some shop inspection.
 TT 1: P 1. TT 6.3: P 6.3. Refers to C. A. Betts, W. J. Boucher, J. V. Davies, F. C.
 Hitchcock, J. W. Smith, F. C. Wilson.

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(8) BROWN, REX LENOI, 503 West Main St., Urbana, Ill. (Age 32. Born Kingman,
 Kans.) 1919 B. S. in Civ. Eng., Univ. of Kans. 1921 M. S. in Theoretical and Applied
 Mechanics, Univ. of Ill. TT 4: P 4. Sept. 1919 to Sept. 1921 Graduate Student and
 Graduate Research Asst., Sept. 1921 to Sept. 1925 Research Asst., and Sept. 1925 to date
 Research Associate, in Theoretical and Applied Mechanics, Univ. of Illinois. TT 7.3: P 7.3:
 RC 3.3. TT 11.3: P 11.3: RC 3.3. Refers to J. O. Draffin, M. L. Enger, H. F. Gonnerman,
 H. H. Jordan, M. S. Ketchum, F. C. Lohmann, G. W. Pickels, W. A. Slater, A. N. Talbot,
 C. C. Wiley.

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(4) BRYSON, WILLARD, Care, Cement Gun Co., Inc., Allentown, Pa. (Age 32. Born
 Yakima, Wash.) 1915 to 1917 student, Univ. of Washington. TT 1: P 1. March 1919 to Feb.
 1921 with Cia. Mexicana de Petroleo, El Agulla, S. A., Puerto Mexico, Mexico, as Asst. Supt.
 for State of Tabasco, Mexico, in charge of construction of roads, derricks, reservoirs, bridges
 and buildings, surveys, materials, camp administration. TT 2: P 2: RC 2. Aug. 1921 to
 Aug. 1923 Appraisal Engr. (Civilian), U. S. Navy Dept., Pensacola, Fla., on appraisal and
 valuation of naval air station. TT 0.5: SP 0.5. Aug. 1923 to March 1924 Asst. Engr., Pay-
 master, etc., Union Bridge & Constr. Co., Kansas City, Mo., on a railroad bridge at Jackson-
 ville, Fla., drafting, cost analysis, etc. TT 0.3: SP 0.3. March 1924 to Sept. 1925 Asst.
 Supt. of Constr. and Res. Engr., Turner Constr. Co., on buildings in New York City and
 Jacksonville, Fla. TT 1.6: P 1.6: RC 1.6. Sept. 1925 to June 1928 Supt. of Constr. with
 Arthur F. Perry, Jr., Inc., Jacksonville, on all types of construction and design of small
 structures. TT 2.7: P 2.7: RC 2.5: D 0.2. June 1928 to date Engr., Cement Gun Co., Inc.,
 Allentown, Pa., on design of structures, inspection, estimating, supervision of construction, etc.
 TT 0.7: P 0.7: D 0.7. TT 8.8: SP 0.8: P 8: RC 6.1: D 0.9. Refers to B. C. Collier,
 R. Y. Middleton, A. F. Perry, Jr., T. A. Smith, L. R. Talbot.

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(4) BYRON, FREDERICK WILLIAM, 519 Pine St., Steelton, Pa. (Age 25. Born Lewiston,
 Me.) 1927 B. S., Mass. Inst. Tech. TT 4: P 4. July 1927 to date Learner, Structural
 Fabricating Shop, Bethlehem Steel Co. TT 0.8: SP 0.8. TT 4.8: SP 0.8: P 4. Refers
 to J. H. Myers, C. M. Spofford.

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(7) CAIRNS, GEORGE SIMPSON, 3724 Roberts St., Milwaukee, Wis. (Age 30. Born
 Ardmore, Mo.) 1923 B. S. in Eng., Univ. of Mo. TT 4: P 4. May 1923 to date with
 Milwaukee (Wis.) Elec. Ry. & Light Co. as follows: May 1923 to Dec. 1925 Foreman on
 concrete paving; field control and design of concrete mix and making test specimens; Dec.
 1925 to Aug. 1927 Inspector, until Sept. 1926 with contractor on force account work without
 completed layout plans, grading, concrete retaining walls, highway bridge and storm sewers,
 field control of concrete (9 months), office work, surveying, subdivision, etc., in charge of
 party (4 months) and on concrete structures for grade separation, field control and design
 of concrete, planning and laying out work (7 months); since Aug. 1927 Asst. Engr., one
 year in field charge of concrete structures on grade separation field control and design of con-
 crete, choosing and ordering materials, planning and laying out work and approving field
 conditions, then on office and field work for future grade separations. TT 5.9: P 5.9: RC 1.2.
 TT 9.9: P 9.9: RC 1.2. Refers to H. E. Bandtel, B. E. Brevik, H. A. LaRue, E. J.
 McCaustland, F. C. Schroeder, C. L. Smith.

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(1) CHAPMAN, CLIFFORD FREDERICK, 617 Fairmount Ave., Westfield, N. J. (Age 28.
 Born Hillside, N. J.) 1922 C. E., Princeton Univ. TT 4: P 4. June 1922 to date member
 of firm and Engr., J. F. Chapman & Son, Contrs. and Engrs., Hillside, N. J., acted as Engr.
 and Supt. on concrete road construction for Essex County (2½ miles) and Union County
 (2 miles), N. J., built concrete swimming pool for Dreamland Park, Newark, N. J.; 1923.

built 3 miles of concrete road and 3 bridges for New Jersey State Highway, and concrete roads and sewers (about \$300 000) for Township of Raritan, N. J.; 1924-1926 built seven miles of New Jersey and 1½ miles Pennsylvania State Highway, two miles of road and a bridge for Union County at Springfield and 1½ miles at Hillside; 1927 and 1928 built roads, sewers, etc. on private estate, streets (about \$750 000) in Hillside, etc. *TT 4.2: SP 1.2: P 3: RC 3. TT 8.2: SP 1.2: P 7: RC 3.* Refers to R. R. Barreit, J. L. Bauer, G. E. Beggs, W. L. Hanavan, J. W. Heller, A. Potter, W. A. Stickel.

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(8) **CLARAHAN, CHARLES HENRY, Jr.**, 307 North Michigan Ave., Chicago, Ill. (Age 32. Born Tilton, Iowa.) 1918 B. S., Univ. of Ill. *TT 4: P 4.* July 1918 to July 1919 Rodman, Baltimore & Ohio Chicago Terminal R. R., being instrumentman on track-elevation surveys. *TT 0.5: SP 0.5.* Oct. 1919 to May 1920 Structural Designer, Western Elec. Co., office and factory buildings. *TT 0.3: SP 0.3.* May 1920 to Jan. 1921 and May to Nov. 1921 Structural Draftsman with Stone & Webster, Boston, Mass., and (after May 1921) N. B. Garver, Little Rock, Ark., designing and detailing factory buildings and highway bridges. *TT 1.1: SP 0.3: P 0.8.* Nov. 1921 to Aug. 1922 Asst. Engr., Illinois State Highway Dept., on inspection of small bridge construction and instrumentman on surveys. *TT 0.4: SP 0.4.* Aug. 1922 to date Designer, Strauss Eng. Corporation, estimating and designing fixed and movable steel and concrete bridges. *TT 6.5: P 6.5: RC 5: D 5. TT 12.8: SP 1.5: P 11.3: RC 5: D 5.* Refers to A. A. Clausen, C. A. Ellis, R. S. Eyre, N. B. Garver, C. E. Paine.

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(13) **COOLEY, RUSSELL VAN FORN**, Builders Exchange Bldg., Oakland, Cal. (Age 39. Born Oakland, Cal.) 1912 B. S., Univ. of Cal. *TT 4: P 4.* May 1912 to June 1914 with Pacific Gas & Elec. Co., San Francisco, Cal., as follows: May-July 1912 Draftsman on construction plant details; Aug.-Dec. 1912 Chf. Draftsman at Lake Spaulding Dam, designing construction plant, testing materials, cost records, and Jan. to June 1913 Engr. on detail design of same dam; June 1913 to June 1914 inspecting shop work on penstock for Drum power house. *TT 1.6: SP 0.5: P 1.1: D 1.1.* June 1914 to Oct. 1917 Contr., frame buildings, plain and reinforced concrete structures, excavating, waterproofing, house moving and operated a planing mill. *TT 3.2: P 3.2: RC 3.2.* Oct. 1917 to June 1918 and July to Dec. 1918 with Foundation Co., until June 1918 Res. Engr. at Miami, Ariz., built extension to boiler and power house, cooling towers and pond, installed machinery, concreted vent shaft (600 ft. deep), sunk and concreted new shaft (to 700 ft. level), designed and built construction and hoisting plant, and after July 1918 Designing Engr. at Richmond, Cal., on Toluol plant, piping and still layouts, still and boiler and pumping plant details, reinforced concrete buildings, pile foundations. *TT 1: P 1: RC 0.7: D 0.3.* June to July 1918 Designing Engr. with Couchot & Rosenwald and with Gutleben Bros., at San Francisco, on grain elevators, rice and beet-sugar mills, buildings and bridges, reinforced concrete and steel frame. *TT 0.2: P 0.2: D 0.2.* Dec. 1918 to Oct. 1924 operated planing mill and wood-working factory; designed and built special oak flooring machinery, dry kilning of hard woods, specialized on efficiency production methods. *TT 5.8: P 5.8: RC 5.8.* Oct. 1924 to June 1925 Supt., Youdall Constr. Co., 3 months putting in turbine foundations and altering power house for Southern Pacific R. R. at Oakland, Cal., then building pumping houses for Banta Carbona Irrigation Dist. at Tracy, Cal., excavation, reinforced concrete, steel-frame buildings, installing pumps and motors and pipe lines. *TT 0.8: P 0.8: RC 0.8.* June 1925 to June 1928 Salesman, Soule Steel Co., San Francisco, selling and installing reinforcing steel, designing reinforced concrete buildings and retaining walls. *TT 1.7: SP 1.2: P 0.5: D 0.5.* June to Dec. 1928 Cons. Structural Engr., designing steel, wood and concrete buildings, retaining walls, special machinery, heating plants and factory layouts. *TT 0.5: P 0.5: D 0.5. TT 18.9: SP 1.8: P 17.1: RC 10.5: D 2.6.* Refers to R. G. Clifford, H. B. Hammill, M. P. Kitchel, E. L. Soule, I. C. Steele, H. C. Vensano.

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(10) **COOLIDGE, WARREN ALGERNON**, 111 Twenty-Third Ave. North, Nashville, Tenn. (Age 29. Born Dodge City, Kans.) 1924 B. S. in Civ. Eng., Univ. of Kans. *TT 4: P 4.* Aug. 1919 to Feb. 1920 Rodman and Chainman, Western Eng. Co., Topeka, Kans. *TT 0.2: SP 0.2.* Summer 1920 Computer, Santa Fe R. R. June 1922 to Sept. 1924 (while student) Draftsman, Topeka (Kans.) Title & Bond Co., made maps of subdivisions of city, etc. Sept. 1924 to Sept. 1927 Instructor, and Sept. 1927 to date Asst. Prof. of Civ. Eng., Vanderbilt Univ. Summer 1925 Instrumentman and summer 1926 Materials Inspector, Tennessee State Highway Dept. Since 1927 also made topographic, road and gutter surveys for private parties, including a 1200 acre subdivision and country club. *TT 4.5: P 4.5: RC 2.2: D 0.1. TT 8.7: SP 0.2: P 8.5: RC 2.2: D 0.1.* Refers to C. N. Bass, A. J. Dyer, F. J. Lewis, D. D. McGuire, W. C. McNowen, W. H. Schuerman.

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(4) **CROSETTO, EDWARD FRANCIS**, 814 Columbia St., Scranton, Pa. (Age 32. Born Wellsboro, Pa.) 1918 to 1919 war service. April 1919 to date with Pennsylvania Dept. of Highways as follows: April 1919 to June 1920 Asst. Inspector and Inspector on highway and bridge construction and Instrumentman on surveys, acting as Transitman and Levelman. June 1920 to March 1923 Senior Inspector in responsible resident charge of construction, determining acceptability of materials, deciding methods of execution, supplying engineering details, training, organizing and supervising assistant inspectors and inspectors on about 35 miles of construction; March 1923 to July 1927 Maintenance Supt. in Bradford, Lackawanna and Wyoming Counties, in direct charge of maintenance of approx. 500 miles of roads and streets, determining acceptability of materials, employing, training and organizing personnel, planning and constructing surfacing and surface treatment of highways, bridges and guard rail, widening roads, snow removal, road and street repairs, directing all equipment, etc.; since July 1927 Asst. Engr. (Constr.), in direct charge of state and state-aid highway construction projects in Lackawanna, Wyoming and Susquehanna Counties, supervising surveys and inspection forces, deciding methods of execution on contracts and furnishing engineering advice. *TT 9.2: SP 0.6: P 8.6: RC 5.9.* Refers to J. P. Ambler, W. E. Bailey, C. H. Buckius, A. L. Dittmar, A. E. Farrington, J. W. Follin, H. S. Mattimore, J. S. Ritchey, H. D. Stoll, P. M. Tebbs.

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(11) **DAVEY, THOMAS FARRANCE**, 2046 Fairbourn Ave., Los Angeles, Cal. (Age 31. Born Walthamstow, Essex, England.) 1921 B. S., Faculty of Eng., London (England) Univ. Aug. 1914 to July 1918 Machinist, Fitter and Tester, Newall Eng. Co., London, manufacture of high-precision instruments and gauges. *TT 2: SP 2.* July 1918 to Jan. 1919 Cadet, Royal Air Force, Commissioned 2d Lieut., training for aerial surveying and piloting. *TT 0.3: SP 0.3.* Sept. 1921 to Jan. 1925 Asst. to Chf. Engr., British Pitometer Co., Ltd., London, and Kilmarnock, Scotland, on design, testing, supervision of manufacture and installation of hydraulic equipment, including design, construction and erection of weirs, Venturi meters and pitometers, pipe-flow and pumping tests, etc. for various large concerns (names given in applications). *TT 3.3: P 3.3: RC 3.3: D 1.6.* Feb. 1925 audit and inspection of properties of British & American Mercantile Co., El Centro, Cal., for Trustees of A. Mosley, C. M. G., London. *TT 0.1: P 0.1: RC 0.1.* March to May 1925 Estimator, Fitzgerald Constr. Co., Los Angeles, Cal., estimating and preparing plans for grading, drainage, sidewalks and subdivision of Montebello Park. *TT 0.2: P 0.2: RC 0.1: D 0.1.* May 1925 to Sept. 1926 Designer, Pan American Petroleum Co., Cal., on quantity surveys and design of steel, timber, tile and reinforced concrete structures, including mill buildings, retaining walls, foundations for cooling towers, stills, heaters, etc. for asphalt, caustic and clay recovery, cracking and topping plants, three timber-roofed concrete-lined earth reservoirs (one oil storage, 4 000 000 bbl.). *TT 1.3: P 1.3: RC 1.3: D 1.3.* Oct. 1926 to April 1928 Asst. to Res. Engr. with Stone & Webster, Inc., responsible for design of tunnels, harbor works, concrete placing equipment, pump and compressor houses and structural details, etc., on contract (\$10 000 000) for erection of Long Beach (Cal.) steam plant, also designs for floating two tanks (diameter 86 ft.) $\frac{1}{4}$ mile. *TT 1.5: P 1.5: RC 1.5: D 1.5.* May 1928 to date Civ. Eng. Designer, Union Oil Co., Los Angeles, on wharves, rigid reinforced concrete, timber and steel structures, drainage systems, quantity surveys and estimates. *TT 0.8: P 0.8: RC 0.8: D 0.8.* *TT 9.5: SP 2.3: P 7.2: RC 7.1: D 7.3.* Refers to G. N. Adams, E. S. Cole, F. W. Karge, R. J. Reed, H. L. West.

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(1) **DeGROODT, HERVEY STANTON**, 30 Church Street, New York City. (Age 45. Born Jersey City, N. J.) Student in Civ. Eng., Rutgers Coll. (1902 to 1904) and in structural steel and reinforced concrete design, Brooklyn Polytechnic Inst. (1906 to 1908, nights). *TT 1: P 1.* 1905 to 1907 railroad construction, sewer and dock work, F. S. Smith, Civ. Engr., Morristown, N. J. *TT 1: SP 1.* 1907 to 1919 with Brooklyn Rapid Transit (New York Municipal Ry. Co.), until 1912 as Asst. Engr. in charge of field office on construction, track work (surface and elevated), bridge approaches and connections, surveys and all field work in connection with Designing Engr.'s office, then Engr. in charge of preliminary surveys, investigations, etc. for Designing Engr.'s Office for subways and elevated railroads, and after 1914 Div. Engr., in charge of construction of Brighton Beach Line of B. M. T. and other construction on dual contract. *TT 12: P 12: RC 10.* April 1919 to Oct. 1920 Senior Engr. with Ford, Bacon & Davis, New York City, on valuation and appraisal of public utilities and industries. *TT 1.5: P 1.5: RC 1.5.* Oct. 1920 to May 1923 in partnership and Works Mgr. of a contracting company, on public works, state and county contracts in New Jersey, including bridge, steel and reinforced concrete construction, design of industrial plants and buildings, towers, etc. *TT 2.5: P 2.5: RC 2.5: D 2.5.* May 1923 to Oct. 1926 Constr.

Supt., Public Service Production Co., being Chf. Civ. Engr. making recommendations and reports on design and in charge of construction engineering on Kearny power station (5 units). *TT 3.5: P 3.5: RC 3.5.* Oct. 1926 to June 1928 Constr. Mgr. and Vice-Pres., United Steel Constr. Co., on steel erection of buildings, factories, bridges (bascul and truss span), apartment house, etc., including Stanley Theatre, Jersey City, N. J. Bell Telephone Bldg. (22 stories), Newark, N. J. bascule bridge over Hackensack River, Jersey City, highway bridges and viaducts, design of changes and new structures. *TT 1.5: P 1.5: RC 1.5: D 1.5.* June 1928 to date member of firm, Deglem Eng. Co., consulting, design and construction work. *TT 0.7: P 0.7: RC 0.7: D 0.7.* *TT 23.7: SP 1: P 22.7: RC 19.7: D 4.7.* Refers to H. C. Baird, C. Kendall, H. J. Kolb, W. S. Menden, J. O. Reynolds, J. L. Vogel, F. P. Witmer.

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(10) **DE TREVILLE, ALFRED LOUIS**, Glennwanis Hotel, Glennville, Ga. (Age 27. Born Walterboro, S. C.) Student, Clemson Coll. (Sept. 1918 to June 1919) and Univ. of South Carolina (Sept. 1919 to Dec. 1921). *TT 1.5: P 1.5.* June to Sept. 1918 Rodman on surveys. Summer 1920 Rodman, summer 1921 Draftsman, and Jan. 1925 to Feb. 1926 Chf. of Party, State Highway Dept., Columbia, S. C. *TT 1.1: P 1.1: RC 1.1: D 1.1.* Jan. to Oct. 1922 Inspector State Highway Dept., Elizabeth City, N. C. *TT 0.4: SP 0.4.* Oct. 1922 to March 1923 Instrumentman, Highway Dept. of Virginia. March to April 1923 Draftsman, Western Elec. Co., Chicago, Ill. April to May 1923 Inspector, Iowa Highway Dept. *TT 0.3: SP 0.3.* May 1923 to Jan. 1925 Res. Engr., Div. of Highways, Effingham, Ill. *TT 1.7: P 1.7: RC 1.7: D 1.7.* Feb. 1926 to date Locating Engr. and Res. Engr., Georgia Highway Dept., Savannah Div., location of highways, including alignment, levels, plans and bridge data and on construction of concrete pavements. *TT 3.1: P 3.1: RC 3.1: D 3.1.* *TT 8: SP 0.7: P 7.3: RC 5.8: D 5.8.* Refers to B. P. McWhorter, W. R. Neel, O. Otto, E. N. Seymour, S. B. Slack.

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(10) **DICKSON, WILLIAM KENNETH**, Box 12-B, Park Rd., Charlotte, N. C. (Age 33. Born Walhalla, S. C.) 1917 B. S., The Citadel. 1921 C. E., Univ. of S. C. *TT 4: P 4.* Nov. 1919 to April 1921 Draftsman and Instrumentman, South Carolina Highway Dept. *TT 0.7: SP 0.7.* Aug. 1921 to April 1922 Instrumentman and Inspector, Richmond County Permanent Road Comm., on concrete road and bridge construction. *TT 0.3: SP 0.3.* April 1922 to July 1923 Inspector, North Carolina Highway Comm., on highway and bridge construction at Murphy, N. C., also did instrument work and made estimates. *TT 0.8: SP 0.5: P 0.3.* July to Nov. 1923 Instrumentman, Kentucky State Dept. of Roads, acted as Res. Engr. on grading out of Pikeville, Ky. *TT 0.3: P 0.3: RC 0.3.* Nov. 1923 to March 1925 land surveying and subdivision at Manning, N. C. (private work). *TT 1.3: P 1.3: RC 1.3.* March 1925 to date Res. Engr., Carolina Eng. Co., Charlotte, N. C., on water-works, paving, sewers, etc. in various cities. *TT 3.9: P 3.9: RC 3.9.* *TT 11.3: SP 1.5: P 9.8: RC 5.5.* Refers to G. H. Bishop, R. P. Bishop, J. A. Guissinger, W. M. Jarvis, J. N. Stribling, R. M. Strohl.

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(12) **EDDY, BEN A.** 420 City Hall, Portland, Ore. (Age 36. Born Oakland, Cal.) 1914 B. S. in C. E., Ore. State Coll. *TT 4: P 4.* Summers 1910 and 1911 Rodman and Chainman with City Engr., Roseburg, Ore. Summer 1912 Chainman on a railroad survey, Roseburg. Summers 1913 and 1914, and 1915 and 1916 Field Asst., 1917 and 1919 Chf. of Field Party, U. S. Forest Service, Portland, Ore., last 6 months on survey of land claims, including astronomical observations, handled subsistence, transportation, etc., of field party. *TT 2.5: SP 1: P 1.5: RC 1.5.* 1918 to 1919 Sergeant, Co. G, 23d U. S. Engrs., A. E. F., at Brest, France, being Chf. Draftsman on harbor work, design of water-works, loading cranes, etc., later on front on road maintenance and construction, had charge of several new road jobs. *TT 1: SP 0.5: P 0.5: RC 0.5: D 0.5.* 1920 to date with City of Portland, one year as Instrumentman, one year Draftsman on street and sewer construction, and since 1922 Asst. to City Engr. on special studies of traffic and population, engineering correspondence, preparation of annual report of City Engr., and of articles for engineering publications, handling special engineering matters (under direction of City Engr.), some preliminary designs for viaducts, etc.; on several occasions acted as Chf. of Bureau in absence of Bureau Chf., and handled affairs of office in absence of City Engr. *TT 7.5: SP 1.5: P 6: RC 5: D 1.* *TT 15: SP 3: P 12: RC 7: D 1.5.* Refers to P. H. Dater, D. C. Henny, O. Laurgaard, B. S. Morrow, P. Schuyler, O. E. Stanley.

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(5) **EHLERS, JOSEPH HENRY** Bureau of Foreign and Domestic Commerce, Washington, D. C. (Temporarily at American Embassy, Tokyo, Japan.) (Age 36. Born Hartford, Conn.) 1914 B. S., Trinity Coll. 1916 M. S. in C. E., Univ. of Cal. and M. C. E., Cornell Univ. *TT 4: P 4.* 1916 Rodman and Draftsman, Delaware, Lackawanna & Western R. R.

TT 0.2: SP 0.2. 1917 to 1918 in Shop, Drafting and Erection Depts., Bethlehem Steel Bridge Corporation. TT 1.1: SP 0.4: P 0.7: D 0.3. 1918 Shop and Mill Inspector for F. M. Masters, Harrisburg, Pa., part of time in charge of inspection of 644-ft. riveted span across Ohio River. TT 0.5: P 0.5: RC 0.3. 1919 Chf. Inspector, Pittsburgh Dist., for Modjeski & Angler, supervising inspection in western Pennsylvania, Ohio and West Virginia. TT 0.5: P 0.5: RC 0.5. Sept. 1919 to March 1920 with Alaska Juneau Gold Min. Co., assisting Constr. Mgr. on plant enlargement; drafting, design and field supervision. TT 0.6: P 0.6: RC 0.6: D 0.3. June 1920-July 1924 Prof. of Structural Eng., Pei Yang Univ., Tientsin, China, also Director of Eng. Materials Laboratory; also 1923 to 1924 Editor, journal of Association of Chinese and American Engineers (*The Oriental Engineer*), and first half of 1923 Field Engr., Asia Development Co., on diversion of Yellow River, in charge of construction on dam. TT 3.9: P 3.9: RC 3.9. Aug. 1924 to Aug. 1926 travel, sales and research work, etc. Aug. 1926 to date Eng. Trade Commr., U. S. Dept. of Commerce, Washington, reporting on engineering projects in Japan and handling technical problems relating to trade promotion. TT 2.5: P 2.5: RC 2.5. TT 13.3: SP 0.6: P 12.7: RC 7.8: D 0.6. Refers to F. A. Barnes, C. E. Chase, C. Derleth, Jr., R. D. Goodrich, H. S. Jacoby, O. J. Todd, J. A. L. Waddell.

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(8) EMERY, FRANK EDWARD, Room 810 Swetland Bldg., Cleveland, Ohio. (Age 47. Born Chatfield, Minn.) 1928 Registered Structural Engr., State of Illinois. Studied Civ. Eng. course, International Correspondence Schools. Student Michigan Agricultural Coll., Preparatory Course (1 year), Ohio Northern Univ. (1 year) and special work, Ohio State Univ. (parts of 2 years). TT 1: P 1. 1901 to 1909 Rodman and Chainman with L. P. Wolff, Cons. Engr., St. Paul, Minn. (about 1½ years), Draftsman, Minneapolis Steel & Machinery Co. (about 1½ years). Draftsman, Jeffry Mfg. Co., Columbus, Ohio (about 1¼ years) and Estimator and on general construction (grain elevator design) with C. E. Benell, Gen. Contr., Brandon, Manitoba (about 1½ years). TT 3.8: SP 2.3: P 1: RC 0.5: D 0.5. 1909 to April 1914 Asst. Chf. Engr. and Chf. Draftsman, Manitoba Bridge & Iron Works, Winnipeg, Manitoba. TT 4.4: P 4.4: RC 4.4: D 4. April 1914 to May 1915 member of firm, Poole & Emery, Gen. Contrs., Regina, Saskatchewan. TT 1.1: P 1.1: RC 0.7. May to Dec. 1915 Asst. Western Dist. Inspector of Arms and Ammunition, Canadian Dept. of Militia and Defence. TT 0.6: P 0.6: RC 0.6: D 0.3. Dec. 1915 to April 1919 Lieut., Capt. and Major, Canadian Expeditionary Forces, in England and France. TT 3.4: P 3.4: RC 3.4: D 1. April-Dec. 1919 Municipal Engr., Manitoba Road Dept., in charge of road building. TT 0.7: P 0.7: RC 0.7: D 0.7. Jan. 1920 to July 1924 Sales Engr., Manitoba Bridge & Iron Works, Winnipeg, in charge of Calgary (Alberta) office. TT 4.6: P 4.6: RC 4.6: D 4.6. Sept. 1924 to May 1925 Draftsman and Checker, Jos. T. Ryerson & Sons, Chicago. TT 0.4: SP 0.4. May 1925-Dec. 1926 Constr. Supt., Swift & Co., Constr. Dept., Chicago. TT 1.7: P 1.7: RC 1.7: D 0.5. Jan. 1927 to April 1928 Sales Engr., International Steel & Iron Co., of Evansville, Ind. in charge of Chicago office. TT 1.2: P 1.2: RC 1: D 1. April 1928 to Feb. 1929 Chf. Engr. and Sales, American Roof Truss Co., Chicago; at present Dist. Engr., Structural Clay Tile Association, Cleveland, Ohio. TT 0.8: P 0.8: RC 0.8: D 0.8. TT 23.3: SP 2.7: P 20.6: RC 18.4: D 13.4. Refers to G. W. Craig, A. S. Dawson, G. N. Houston, G. Jeppesen, D. Moomaw, H. B. Muckleston, O. Shanks, C. R. Tiebout.

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(10) FELTNER, CHARLES EDWARD, Box 487, Chapel Hill, N. C. (Age 22. Born Berryville, Va.) 1928 B. S. in Civ. Eng., Va. Pol. Inst. TT 4: P 4. June to Sept. 1928 Instrumentman, Atmospheric Nitrogen Corporation, Hopewell, Va., on construction. TT 0.2: P 0.2. Sept. 1928 to date Instructor in Eng., Univ. of North Carolina. TT 0.4: P 0.4. TT 4.6: P 4.6. Refers to R. B. H. Begg, G. M. Braune, T. Saville.

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(1) FIALA, ANTHONY, 25 Warren St., New York City. (Age 59. Born Jersey City, N. J.) May to Nov. 1898 in charge of Mapping Squad, Troop C, New York Volunteer Cavalry, Spanish American War at Coamo, Porto Rico; 1900 to 1901 1st Lieut. and Battalion Quartermaster 14th Regt., National Guard, New York, being Instructor of Military Eng. TT 2.3: RC 2.3. 1896 to 1901 installed and managed photo engraving plant, Brooklyn Daily Eagle. TT 5: RC 5. May 1901 to Dec. 1902 Scientific Asst. and Photographer, Baldwin-Ziegler Polar Expedition, made motion pictures in Arctic. TT 1.5: RC 1.5. Dec. 1902 to Sept. 1905 Commander, Fiala-Ziegler Polar Expedition, *S. Y. America*, discovered and mapped new Islands of Water Ways in Archipelago of Franz Josef Land. TT 2.5: RC 2.5. 1908 to 1918 inaugurated outdoor and Sporting Goods Dept., Rogers Peet Co., being Buyer and Mgr. 1913 to 1914 equipped, and accompanied Col. Theodore Roosevelt, being in charge of equipment on trip through Brazilian Wilderness, explored Papagaleto River and descended Jurvena and Tapajos Rivers to Amazon. TT 10: RC 10. 1915 to 1919 with U. S.

Army, until 1916 as Capt. and Organizer, Machine Gun Troop, 1st New York Cavalry, Mexican Border; 1917, to 1919 with Eng. Sec., Ordnance Dept., became Major in charge of small arms proving ground, U. S. Arsenal, Springfield, Mass., suggested and designed new proving ground building and ranges, and had charge of purchase and installation of scientific equipment and instruments. 1919 to date Pres., Fiala Outfits, Inc. TT 10: RC 10, TT 24.7: RC 24.7. Refers to T. E. Brown, Jr., T. A. Forbes, C. O. Gunther, R. W. Hebard, G. H. Matthes.

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(1) **FICKENSCHER, ELMER WALTER**, 53 Elm St., Elizabeth, N. J. (Age 27. Born Jersey City, N. J.) Structural Engr., State of New Jersey. 1928 B. S. in C. E., Cooper Union Night School. Jan. 1918 to April 1927 Draftsman, Delaware, Lackawanna & Western R. R., Hoboken, N. J., until July 1920 with Eng. Dept., map drafting, rail inspection, rod and chain work, then with Bridge Dept., tracing, detailing and designing reinforced concrete structures, field inspection, and detailing and designing steel and timber bridges and falsework. TT 7: SP 2.2: P 4.8: RC 2.5: D 2.5. April 1927 to date Designer, until July 1928 with Erie R. R., on timber, steel and concrete structures, then with Ambursen Constr. Co., on reinforced concrete dams and accessories, and stress determination and investigation. TT 1.7: P 1.7: D 1.7. TT 8.7: SP 2.2: P 6.5: RC 2.5: D 4.3. Refers to C. V. Davis, T. G. Griggs, A. H. Henckel, E. Sudler, J. L. Vogel.

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(7) **FIEDLER, ALBERT GEORGE**, 509 Federal Office Bldg., Minneapolis, Minn. (Age 32. Born Philadelphia, Pa.) 1918 B. S. in Civ. Eng. and 1927 C. E., Pa. State Coll. TT 4: P 4. May to Sept. 1920 Field Supt. and Engr. with B. G. Coon Constr. Co., Luzerne, Pa., being Engr. for Contr. in charge of construction of reinforced concrete highway. TT 0.4: P 0.4: RC 0.4. May-Aug. 1918 and Jan. 1919 to date (except May to Sept. 1920) with U. S. Geological Survey, as follows: May-Aug. 1918 and Jan. to July 1919 Jun. Engr., July 1919-April 1920 and Oct. 1920 to Sept. 1923 Asst. Engr. on stream gauging, computing discharge records of surface streams and compiling stream-gauging records; Sept. 1923-June 1925 Engr., on stream gauging, surface-water investigations and reports; July 1925 to Nov. 1928 Associate Engr., and Nov. 1928 to date Engr. (Hydr.), investigating and reporting on ground waters of various areas; at present in charge of investigation of water-well drilling methods. TT 9.6: SP 0.4: P 7.2: RC 4.2. TT 14: SP 0.4: P 13.6: RC 4.6. Refers to G. C. Baldwin, C. S. Clark, C. E. Ellsworth, C. E. McCashin, J. A. Norris, C. G. Paulsen.

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(1) **FRALEIGH, PHILIP WALDORF**, 319 Hickory St., Teaneck, N. J. (Age 37. Born Red Hook, N. Y.) 1915 B. S. in Civ. Eng., Pa. State Coll. TT 4: P 4. Sept. to Nov. 1915 Rodman, being Asst. to Party Chf., Feb. 1916 to May 1917 Transitman and Draftsman, being Party Chf., May to Oct. 1917 and July 1919-Jan. 1923 Chf. Transitman, M. of W. Dept., on design and layout of masonry and track structures, surveys, drainage designs, estimates and reports, and Feb. 1923 to May 1924 Asst. Supervisor of Track on maintenance of roadway and track, all for M. of W. Dept., New York Central R. R. TT 6.5: SP 0.1: P 6.4: RC 3.8: D 2.6. Nov. 1915 to Feb. 1916 Draftsman, Union R. R. TT 0.1: SP 0.1. Oct. 1917 to June 1919 with Engrs., U. S. Army, A. E. F., finally Battalion Sergeant Major, about 4 months putting in sewers and septic tanks at a hospital. May 1924 to date with Teaneck Township, N. J., until Jan. 1927 as Asst. Township Engr., in charge of field work on street and sewer construction and maintenance, design of sewers and highways, etc., then Supt. of Public Works, in charge of Public Works Dept., including construction and maintenance of streets and sewer system, etc. TT 4.6: P 4.6: RC 4.6: D 4.6. TT 15.2: SP 0.2: P 15: RC 8.4: D 7.2. Refers to C. L. Bogert, J. M. M. Greig, A. Noack, J. F. Sanborn, E. D. Walker.

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(1) **FREUND, MAX FREDERICK**, 3744 Olinville Ave., New York City. (Age 36. Born Dolgeville, N. Y.) Licensed Prof. Engr. and Land Surveyor, New York State. Diploma in Civ. Eng. International Correspondence Schools. Correspondence study with Univ. of Wisconsin. Aug. 1910 to Aug. 1912 Chainman, Poughkeepsie Div., New York State Highway Comm., acting as Instrumentman and Inspector, on survey and construction and as Asst. on design and estimates for highways. TT 1: SP 1. Aug. 1912 to April 1914 Jun. Asst. Public Service Comm., New York City, 3d Division, being Instrumentman and Chf. of Party on line and grade and preliminary surveys, and on computation of estimates on subway construction in New York City. TT 0.9: SP 0.9. April 1914 to Jan. 1918 Leveler and Asst. Engr., New York State Highway Comm., Rochester Div., being Engr. in charge of surveys, design and construction of macadam, brick and concrete highways (approx. 40 miles). TT 3.3: SP 0.3: P 3: RC 3: D 2. Jan. to May 1918 Jun. Engr., Public Service Comm., New York City, in charge of completing construction and computing final estimates on station

finish contract on three miles of elevated railroad, White Plains Ave. extension. *TT 0.3: P 0.3: RC 0.3: D 0.3.* May 1918 to April 1919 Chf. of Party, Air Nitrates Corporation, Muscle Shoals, Ala., in charge of two survey parties covering location and mapping of all subsurface structures, and other surveys in connection with Nitrate Plant No. 2. *TT 1: P 1: RC 1: D 0.2.* April to Dec. 1919 Res. Engr., Moreland and Bennett, Pine Bluff, Ark., in charge of construction, plans and estimates on 30 miles of bituminous macadam highways and 7 steel truss and I-beam bridges. *TT 0.6: P 0.6: RC 0.6: D 0.2.* Jan. to April 1920 Draftsman, Transit Comm., New York City, on design of New York subway structures. *TT 0.3: P 0.3: D 0.3.* April to July 1920 Res. Engr. and Supt., Wm. P. Rae, Brooklyn, N. Y., in charge of development of Brighton Lawns, Sheepshead Bay, New York City, laying out streets and water lines; cinder filling and top soil. *TT 0.3: P 0.3: RC 0.3: D 0.1.* July to Sept. 1920 Materials Engr., M. Kelly and Son, Little Rock, Ark., in charge of ordering and delivery of materials for highway bridge construction. *TT 0.3: P 0.3: RC 0.3.* Sept. 1920 to July 1921 Jun. Asst. Engr., Tunnel Div., Transit Comm., New York City, being Instrumentman and Recorder on surveys. *TT 0.6: SP 0.2: P 0.4.* July 1921 to date Asst. Engr., Board of Water Supply, New York City, being in charge of surveys for new dam sites, then Sec. Engr. on steel pipe-line construction in Brooklyn (66 and 72 in.), and on new City Tunnel No. 2. *TT 7.5: P 7.5: RC 7.5: D 2. TT 16.1: SP 2.4: P 13.7: RC 13: D 5.* Refers to R. W. Armstrong, H. R. Bouton, H. S. Loughran, T. Merriman, G. Paaswell, W. E. Spear, P. Waller.

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(3) **FRISK, VLADIMIR GEORGE**, 19 North Ferry St., Schenectady, N. Y. (Age 31. Born Petrograd, Russia.) 1921 Engr. of Ways of Communications, Inst. of Engrs. of Ways of Communications, Petrograd, Russia. *TT 4: P 4.* Feb. 1922 to May 1923 Designer of concrete structures, office of J. J. Kittner, Diplom Engr., Helsingfors, Finland. *TT 1.3: P 1.3.* July 1923 to date Designer, Gen. Elec. Co., Schenectady, N. Y., until May 1924 with Switchboard Dept., then with Plant Eng. Dept. *TT 5.6: P 5.6: RC 3.7: D 3.7. TT 10.9: P 10.9: RC 3.7: D 3.7.* Refers to N. A. Alexieff, D. A. Allee, V. T. Givotovsky, G. S. Hook, A. Vogel.

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(4) **FULLER, WILLIAM WHITFIELD**, 287 West Haines St., Germantown, Philadelphia, Pa. (Age 22. Born Canton, N. Y.) 1928 B. S. in Civ. Eng., Clarkson Coll. Tech., Potsdam, N. Y. *TT 4: P 4.* June 1928 to date Detailer, American Bridge Co., Pencoyd, Pa., on structural steel for office buildings. *TT 0.3: SP 0.3. TT 4.3: SP 0.3: P 4.* Refers to W. J. Farrisee, F. C. Wilson.

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(4) **GERWIG, MARK ALBERT**, Box 72, North Glenside, Pa. (Age 31. Born Pittsburgh, Pa.) 1923 C. E., Rens. Pol. Inst. *TT 4: P 4.* Sept. 1923 to March 1924 Instrumentman and Draftsman, Pennsylvania State Highway Dept. *TT 0.3: SP 0.3.* March 1924 to March 1925 Structural Draftsman, City Transit Dept., Philadelphia, Pa., on Broad St. Subway, steel and concrete design of sewers and vents, layout of power ducts and power-duct manholes for subway, work on underpinning and underground structures. *TT 0.5: SP 0.5.* March 1925 to Feb. 1926 Engr. and Estimator, Kalman Steel Co., Philadelphia and Baltimore offices, detailing, estimating and designing concrete buildings, bridges and hydraulic structures. *TT 0.9: P 0.9.* Feb. 1926 to date Structural Engr., The Ballinger Co., Philadelphia, on design and supervision of steel and concrete buildings, theatres, boiler houses, suspension coal- and ash-bunkers, water towers, standpipes and various concrete work. *TT 3: P 3: RC 3: D 3. TT 8.7: SP 0.8: P 7.9: RC 3: D 3.* Refers to C. D. Babcock, E. R. Cary, C. de Moll, P. C. Ricketts, S. Smith, C. H. Stevens, I. S. Towsley.

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(15) **GILL, OLIVER PRESTON**, Teague, Tex. (Age 23. Born Bellevue, Tex.) 1927 B. S. in C. E., Agri. and Mech. Coll. of Tex. *TT 4: P 4.* Sept. 1927 to March 1928 City Engr., Bryan, Tex. *TT 0.5: P 0.5: RC 0.5: D 0.5.* April 1928 to date Instrumentman, State Highway Dept., in charge of state highways location in Freestone County. *TT 0.9: P 0.9. TT 5.4: P 5.4: RC 0.5: D 0.5.* Refers to M. B. Hodges, J. T. L. McNew, T. A. Munson, J. J. Richey, C. E. Sandstedt.

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(4) **GILLESPIE, HAROLD HENWOOD**, 327 South Seventeenth St., Allentown, Pa. (Age 31. Born New York City.) Sept. 1915 to May 1917 and Sept. 1919 to June 1920 student, Civ. Eng. course, Union Coll., Schenectady, N. Y. *TT 1.5: P 1.5.* Summer 1916 Rodman and Chainman, New York Central R. R. May 1917 to March 1919 Q. M., First Class, U. S. Navy, Signal Q. M. on U. S. S. *Emeline*, on chart revisions, navigating, signal work, etc. *TT 0.8: SP 0.8.* March to Sept. 1919 Transitman with W. A. Smith, Engr., Tuckahoe, N. Y., on plotting and computing surveys, etc. *TT 0.5: P 0.5.* July 1920 to July 1923 Timekeeper,

Foreman and Asst. Engr., Traylor-Dewey Contr. Co., at Camden, N. J., Lewiston, Pa., Sesser and Springfield, Ill., Oklahoma City and Tulsa, Okla., on building construction, mine shaft lining and erecting of reservoir. *TT 3: P 3: RC 1.* July 1923 to date with Cement Gun Contr. Co., as Supt. in charge at Bogalusa, La., Ansonia, Conn., Passaic, N. J., Buffalo, N. Y., Nashville and Chattanooga, Tenn., and Miami, Fla.; since Feb. 1926 Dist. Engr. on design, estimating and sales work in Pennsylvania, Ohio, West Virginia and Virginia. *TT 5.6: P 5.6: RC 3: D 1.* *TT 11.4: SP 0.8: P 10.6: RC 4: D 1.* Refers to K. Bryan, Jr., B. C. Collier, F. E. Freeland, W. A. Smith, L. R. Talbot.

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(1) **GILMAN, GEORGE THOMAS**, 59 Burling Ave., Flushing, N. Y. (Age 27. Born Brockton, Mass.) 1923 B. S., Mass. Inst. Tech. *TT 4: P 4.* June-Aug. 1923 Junior Highway Engr., Illinois State Highway Comm., Carbondale, Ill., on office work, field inspection of concrete road construction, layout of lines, grades, etc. *TT 0.1: P 0.1: RC 0.1.* Sept. 1923-May 1924 Jun. Engr., then Aid, U. S. Coast and Geodetic Survey, Washington, D. C., 3 months on current survey of San Francisco (Cal.) harbor, 2½ months office work and instruction at Washington office, and 3½ months on hydrographic surveying of east coasts of Florida and North Carolina. *TT 0.6: SP 0.1: P 0.5.* June to Oct. 1924 and June to Dec. 1925 with Board of Hudson River Regulating Dist., Albany, N. Y., as Jun. Engr. on highway relocation, being Chf. of field party, and (after June 1925) Asst. Engr., being Chf. of transit party in charge of highway location, running traverses, etc., all in connection with Sacandaga Reservoir. *TT 0.9: P 0.9: RC 0.9.* Oct. 1924 to June 1925 Instructor, Civ. Eng. Dept., Univ. of Florida. *TT 0.6: P 0.6: RC 0.6.* Jan.-July 1926 Chf. Engr., Pinehurst Gardens Development of South Florida Land & Constr. Co., at Eau Gallie, Fla., on road construction, drainage, etc. *TT 0.6: P 0.6: RC 0.6: D 0.2.* Aug.-Dec. 1926 Cost Engr., Duval Eng. & Contr. Co., Jacksonville, Fla., in charge of cost study and maintenance of material supply for contractor on 9 miles of state highway construction. *TT 0.4: P 0.4: RC 0.4.* Jan. 1927 to June 1928 Asst. Engr., Dixie Constr. Co., 5 months in Birmingham (Ala.) office, on investigation and design for constructing plant layout and design, stream control and closure operations, and 11 months in charge of field office during reconstruction of Upper Tallassee (Ala.) Dam, field design, monthly estimates, etc. *TT 1.3: P 1.3: RC 1.3: D 0.5.* July 1928 to date Asst. Engr. with Moran & Proctor, Cons. Engrs., New York City, on investigation and design on foundation problems. *TT 0.6: P 0.6: RC 0.6: D 0.6.* *TT 9.1: SP 0.1: P 9: RC 4.5: D 1.3.* Refers to A. Brest, J. G. A. Johnson, C. S. Proctor, P. L. Reed, C. D. Riddle, R. B. Shepard, Jr., C. M. Spofford.

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(4) **HAFNER, RALPH AUGUSTUS**, 4840 D St., Philadelphia, Pa. (Age 25. Born Philadelphia, Pa.) June 1923 to date with City of Philadelphia, Pa., until Oct. 1924 successively as Chairman, Rodman and Transitman, on surveys, etc., then Second Asst. Surveyor in charge of Corps, on laying out lines and grades for construction of pier on Delaware River, etc.; March 1925 to Jan. 1929 Asst. Engr. in charge of a corps staking out main sewers and tunnels in city, inspected and recommended necessary rebuilding of old main sewers, ran preliminary surveys and made plans for sewers and tunnels, also Engr. on tunnels in rock; at present First Asst. Surveyor, in charge of laying out of lines and grades for sewers, in 16th Survey Dist. *TT 5.1: SP 0.6: P 4.5: RC 2.* Refers to H. M. Beaumont, T. Buckley, M. T. Connell, E. J. Dauner, A. Z. Hoffman, H. J. Sowden.

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(12) **HARPER, PAUL ALBERT**, 4714 Sixth Ave. N. E., Seattle, Wash. (Age 32. Born Mechanicsburg, Ohio.) Diploma, Certificat d'Etudes Francaises, Univ. of Bordeaux, France. 1924 B. S. in C. E., Univ. of Wash. *TT 4: P 4.* Summer 1912 Bridge Carpenter, Northern Pacific R. R. Summer 1913 erecting sets, Hitt Fireworks Co. Summer 1914 Carpenter, June 1915 to Sept. 1916 and Nov. to Dec. 1919 Foreman on maintenance, California Highway Comm. *TT 0.7: SP 0.7.* Sept. 1916 to June 1917 and Oct. 1920 to April 1924 student, Univ. of Washington. June 1917 to Sept. 1919 Sergeant, 18th Engrs., U. S. Army, A. E. F., France. *TT 1.1: SP 1.1.* Sept. to Nov. 1919 Inspector, dredge fill, and Jan. to June 1920 track and switch laying, Port of Seattle Comm. *TT 0.4: SP 0.4.* July to Sept. 1920 Mechanic, Ford Motor Co., Seattle. *TT 0.2: SP 0.2.* April 1924 to April 1925 Salesman, building materials, Pioneer Sand & Gravel Co., Seattle. May 1925 to Jan. 1929 Inspector and Asst. Engr., Eng. Dept., Associated Oil Co., Seattle. *TT 3.7: P 3.7: RC 2.* *TT 10.1: SP 2.4: P 7.7: RC 2.* Refers to F. H. Fowler, H. M. Hadley, C. M. Jenkins, A. J. McNeil, R. E. Post.

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(13) **HARRIS, HOWARD AVERY, Jr.**, 1614 Everett St., Alameda, Cal. (Age 27. Born Fowler, Cal.) 1924 B. S., Univ. of Cal. *TT 4: P 4.* May 1924 to Feb. 1925 Draftsman and Computer, San Joaquin River Water-Storage Dist. *TT 0.4: SP 0.4.* March 1925 to Oct. 1926 Draftsman and Asst. Engr., Fresno City Water Co., preparing estimates, making

plans for pipe-line layouts and pump-station buildings, etc. *TT 1.5: P 1.5.* Oct. 1926 to date Asst. Chf. Engr., until March 1928 with California Water Service Co., then with Public Works Eng. Corporation, Pacific Coast Div., in direct charge of office work and has indirect supervision of field force; office work includes programs for construction (\$1 500 000 annually), checking estimates, making designs of water-works structures, keeping statistical data, preparing specifications, awarding contracts, improvement of methods, etc. *TT 2.5: P 2.5: RC 2.5. TT 8.4: SP 0.4: P 8: RC 2.5.* Refers to H. Barnes, E. K. Barnum, E. E. Blackie, B. A. Etcheverry, F. S. Foote, S. T. Harding, C. G. Hyde.

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(7) HENNES, ROBERT GRAHAM, 1721 McClellan Ave., Detroit, Mich. (Age 23. Born Lake Linden, Mich.) 1927 B. S. in C. E., Univ. of Notre Dame. 1928 M.S., Mass. Inst. Tech. *TT 4: P 4.* Feb. to April of years 1926 and 1927 Undergraduate Asst., being Instructor in surveying field work, Univ. of Notre Dame. Summers 1923-1927 and June 1928 to date with Dept. of Public Works, Detroit, Mich., as Laborer and Instrumentman, operating transit and level, acting as Chf. of Party, etc., Survey Div., and (since June 1928) Senior Eng. Aide, Bureau of Tests, on research work, investigating effect of sewage, curing and temperature on strength of concrete, writing reports, supervising core drilling, etc. *TT 0.9: P 0.9. TT 4.9: SP 0.2: P 4.7.* Refers to H. K. Barrows, M. R. Fisher, F. C. Morse, R. G. Tyler.

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(13) JAKOBSSON, HERMAN ANTON, 2926 Ulloa St., San Francisco, Cal. (Age 38. Born Levide, Sweden.) 1916 C. E., Royal Univ. Tech., Stockholm, Sweden. *TT 4: P 4.* June 1910-July 1911 Apprentice in engineering, on construction of canal, Trollhättan, Sweden. Sept. 1911 to March 1912 Instrumentman and Timekeeper with A. B. Betong-kompaniet, Stockholm, Sweden, on erection of factory. *TT 0.8: SP 0.8.* Nov. 1916 to Nov. 1920 Asst. Engr. and later Res. Engr., Swedish State R. Rs., on construction of lines, bridges and buildings. *TT 3.8: SP 0.1: P 3.7: RC 1.4: D 0.3.* July 1921 to Feb. 1924 with Dutch East Indies Govt., as Designer on bridges, Batavia, Java, later Designer and Asst. Engr. with Irrigation Service, Malang, Java. *TT 2.5: P 2.5: RC 1.9: D 1.9.* June 1924 to Oct. 1925, April to June 1926, Oct. 1926 to Oct. 1927 Draftsman, Field Engr. and Asst. Supt. on construction of several factories and large office buildings, and Jan. to May 1928 Draftsman and Field Engr. on construction of Hotel Sir Fr. Drake, all for Lindgren & Swinnerton, Bldrs. *TT 2.5: SP 0.2: P 2.3: RC 0.6: D 0.4.* Oct. 1925 to April 1926 with C. Heller, Cons. Engr., San Francisco, as Designer and later Owner's Supt. on erection of reinforced concrete building. *TT 0.5: P 0.5: RC 0.2: D 0.2.* June to Oct. 1926 Field Engr. and Draftsman, Steel Form Contr. Co., San Francisco, developing new system for concrete forms. *TT 0.3: P 0.3.* May to July 1928 Structural Designer on two buildings, with Geo. Sellon, and Starks & Flanders, Archts., Sacramento, Cal. *TT 0.2: P 0.2: RC 0.2: D 0.2.* Aug. 1928 to date Designer on Opera Bldg., San Francisco War Memorial. *TT 0.6: P 0.6: D 0.6. TT 15.3: SP 1.2: P 14.1: RC 4.3: D 3.7.* Refers to W. H. Alderson, A. L. Allin, W. S. Hassenmiller, S. I. E. Hjort, C. B. Hopkins, J. J. Rosedale, J. Skytte.

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(4) JENSEN, CYRIL DEWEY, Lehigh Univ., Bethlehem, Pa. (Age 30. Born Brownston, Minn.) 1921 B. S. in C. E., Univ. of Minn. *TT 4: P 4.* April to June 1921 Surveyor for E. W. Kibbey, Civ. Engr., Minneapolis, Minn. *TT 0.1: SP 0.1.* Sept. to Oct. 1921 Draftsman with Toltz, King & Day, Engrs. and Archts., St. Paul, Minn. Oct. 1921 to April 1923 successively Levelman, Transitman and Locating Engr., Minnesota Highway Dept. *TT 1.3: SP 0.3: P 1: RC 0.5.* April 1923 to Sept. 1925 with Northern States Power Co. as Draftsman and Instrumentman on water-power surveys and Asst. Engr. in charge of drilling for dam foundations and in charge of engineering office. *TT 2.1: SP 0.3: P 1.8: RC 0.9.* Sept. 1925 to date with Lehigh Univ., until July 1928 as Instructor in, and since Sept. 1928 Asst. Prof. of Civ. Eng.; summer 1927 in charge of summer surveying camp, and designed sewage system, including Imhoff tank and sewage-pumping plant; summer 1926 Senior Inspector on highway construction, Pennsylvania Highway Dept.; also since Jan. 1928 (part of time) research work on inspection of structural welding, and since Aug. 1928 investigational study of structural welded joints. *TT 3.6: P 3.6: RC 1.2: D 0.4. TT 11.1: SP 0.7: P 10.4: RC 2.6: D 0.4.* Refers to S. A. Becker, A. S. Cutler, R. J. Fogg, M. O. Fuller, W. A. Slater, E. H. Uhler, W. L. Wilson.

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(15) JIMENEZ LOPEZ, CESAR, Don Martin, Coahuila, Mexico. (Age 21. Born Mexico City, Mexico.) 1928 C. E., National Univ. of Mexico. *TT 4: P 4.* Jan. 1927 to date with J. G. White Eng. Corporation, S. en C., until May 1928 on planetable surveys, and Asst. on surveys and field work, Don Martin Reservoir and Rio Salado dam and dike construction; then

Draftsman, Don Martin office and since Sept. 1928 on design of minor structures on main canal and lateral system. *TT 1: SP 1: D 0.3. TT 5: SP 1: P 4: D 0.3.* Refers to R. M. Conner, R. B. Diemer, R. A. See, C. Seger, A. Weiss, F. E. Weymouth.

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(11) **JOHNSON, ELLSWORTH**, 3810½ South Hope St., Los Angeles, Cal. (Age 28. Born Fulda, Minn.) 1922 B. S. in C. E., Univ. of Minn. *TT 4: P 4.* April to Sept. 1920 Rodman, Chicago, Milwaukee & St. Paul Ry. April 1922 to Jan. 1923 Designer and Detailer of reinforced concrete and structural steel, with G. C. Staehle. *TT 0.7: P 0.7: D 0.7.* April to Aug. 1923 Instrumentman with D. C. Fenstermaker on railroad construction in Wyoming and Montana. *TT 0.4: P 0.4.* Sept. 1923 to April 1924 Instrumentman on irrigation and drainage work in Palo Verde Irrigation Dist., Blythe, Cal. *TT 0.6: P 0.6.* April to Aug. 1924 Estimator, Los Angeles (Cal.) Cement Gun Co. *TT 0.2: SP 0.2.* Oct. 1924 to April 1925 Draftsman, American Hoist & Derrick Co., St. Paul, Minn., machinery drafting. *TT 0.5: P 0.5: D 0.2.* April to Dec. 1925 Engr. with Johnson, Drake & Piper, Minneapolis, Minn., on highway construction. *TT 0.7: P 0.7: D 0.7.* Feb. to Oct. 1926 Chf. Draftsman, Sewer Dept., and in charge of plans for boardwalk, Miami Beach, Fla. *TT 0.7: P 0.7: RC 0.7: D 0.4.* Oct. to Dec. 1926 Purchasing Agt., Langthorn-Smith Co., Gen. Contrs., New York. *TT 0.1: SP 0.1.* March to May 1927 Computer on subdivision work, with W. & A. Smadbeck, New York City. *TT 0.2: P 0.2.* May 1927 to Feb. 1928 Chf. Engr., with Otto G. Schmidt, Chicago, Ill., on paving. *TT 0.8: P 0.8: RC 0.8.* Feb. to May 1928 Map Draftsman, Los Angeles County Surveyor's Office, Los Angeles, Cal. *TT 0.2: P 0.2.* May to Dec. 1928 Concrete and Structural Designer, Union Oil Co., Los Angeles. Jan. 1929 to date Estimator, Western Pipe & Steel Co., Los Angeles. *TT 0.6: P 0.6. TT 9.7: SP 0.3: P 9.4: RC 1.5: D 2.* Refers to A. Daniels, F. F. Friend, J. C. Hahn, A. F. Johnson, F. W. Karge, G. S. Lane, J. S. Langthorn, J. S. Langthorn, Jr., E. R. Neff, G. C. Staehle, H. L. West.

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(15) **KILLIAN, MARTIN BURGER**, Care, R. W. Briggs & Co., Inc., Pharr, Tex. (Age 26. Born Stephenville, Tex.) 1926 B. S. in C. E., and 1927 M. Sc. in C. E., Agri. and Mech. Coll. of Tex. *TT 4: P 4.* July 1927 to March 1928 Paving Engr., Cameron County, Tex., on design and control of 55 miles of concrete pavement, supervising all concrete paving inspection. *TT 0.7: P 0.7: RC 0.7: D 0.7.* March 1928 to date Chf. Concrete Engr., R. W. Briggs & Co., Inc., Pharr, Tex., on selection of materials, design of mixes for concrete construction, etc. *TT 0.9: P 0.9: RC 0.9: D 0.9. TT 5.6: P 5.6: RC 1.6: D 1.6.* Refers to J. T. L. McNew, J. J. Richey, W. O. Washington.

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(2) **KINGSBURY, FRANCIS HENRY**, P. O. Box 186, Medfield, Mass. (Age 39. Born Medfield, Mass.) 1912 B. S. Mass. Inst. Tech. *TT 4: P 4.* May 1917 to July 1919 with U. S. Army, until Aug. 1917 at Engr. Officers' Training Camp, Sept. 1917-June 1918 First Lieut., Engrs., and after July 1918 Capt., Engrs., Co. A, 306th Engrs., 81st Div. *TT 2.2: P 2.2: RC 1.8.* July 1912 to date (except May 1917 to July 1919) with Massachusetts State Dept. of Public Health, until April 1917 as Eng. Asst., on inspection of water supplies and sewage-disposal works, examinations of river pollution by trade wastes, stream gauging, engineering computations, reports, maps and diagrams, and after Aug. 1919 Asst. Engr. on investigations, major calculations and design, plans, specifications, contracts and supervision of construction of water-supply, sewerage and sewage-disposal works. *TT 14.1: P 14.1: RC 7: D 4. TT 20.3: P 20.3: RC 8.8: D 4.* Refers to E. S. Chase, E. S. Dorr, X. H. Goodnough, K. R. Kennison, W. J. Scott, A. D. Weston, E. Wright.

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(4) **KOSEL, FRED GEORGE**, 853 North Forty-Third St., Philadelphia, Pa. (Age 27. Born Norwalk, Conn.) 1925 B. S., Pennsylvania State Coll. *TT 4: P 4.* Summer 1924 Inspector, Portland Cement Association, Buffalo, N. Y., on concrete roads and sewer system. June 1925 to date Engr. and Estimator, Wm. Linker Co., Philadelphia, Pa., estimating, drafting, designing, field supervision on commercial and social buildings. *TT 3: SP 0.5: P 2.5. TT 7: SP 0.5: P 6.5.* Refers to H. N. Benkert, W. Linker, R. O'Donnell, R. L. Sackett, E. D. Walker.

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(13) **KRUSI, LeROY FARNHAM**, 1218 Standard Oil Bldg., San Francisco, Cal. (Age 34. Born Alameda, Cal.) 1917 B. S. in C. E., Univ. of Cal. *TT 4: P 4.* May 1917 to July 1919 Sergeant, 2d Lieut. and 1st Lieut., U. S. Army, Motor Transport Corps, hauling ammunition in France, etc. Aug. to Nov. 1919 Inspector, U. S. Bureau of Roads, on road construction along Klamath River. Nov. 1919 to March 1920 Estimator, California State Reclamation Board, on assessments for reclamation work. *TT 0.3: SP 0.3.* March 1920 to March 1928 with Standard Oil Co. of California, until Jan. 1924 as Engr., estimating, designing and in

charge of Structural Sec., Eng. Dept.; Jan. 1924 to Sept. 1926 Asst. Dist. Engr., at Seattle, Wash., in charge of new construction (1 year) and Portland, Ore., in charge of truck operation, repair shop and maintenance crews; after Sept. 1926 Dist. Engr. at Stockton, Cal., in charge of new construction, truck assignments, automobile repair and paint shops, maintenance work and local purchases. *TT 7.3: SP 0.5: P 6.8: RC 4.1: D 2.7.* March to Sept. 1928 Res. Engr., Pasotex Pipe Line Co., El Paso, Tex., in charge of construction of Diesel pumping station with cottages, sewers, water system, lighting, etc. *TT 0.5: P 0.5: RC 0.5.* Sept.-Dec. 1928 travelling. Jan. 1929 to date with Standard Oil Co. of California, on special tax research work. *TT 0.2: P 0.2. TT 12.3: SP 0.8: P 11.5: RC 4.6: D 2.7.* Refers to E. I. Clawiter, C. Derleth, Jr., J. M. Evans, H. H. Hall, S. G. Hindes, F. R. Muhs.

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(1) **LAND, WILBUR EARLE**, Care, Yngenio Santa Fe, San Pedro de Macoris, Dominican Republic. (Age 28. Born Valdosta, Ga.) 1½ years student in Civ. Eng., Emory Univ. At present student in Reinforced Concrete Eng., Wilson Eng. School, Cambridge, Mass. May 1920 to May 1921 Chainman (3 months), Notekeeper (3 months), Draftsman (2 months) and Transmittan (5 months), Ramsey Herndon Co., Orlando, Fla. *TT 0.5: SP 0.5.* May 1921 to May 1923 Advertising Mgr. and Civ. Engr., Dr. P. Phillips Co., Orlando, on surveys, location of lakes, streams, roads, highways and railroads, designed subdivision, constructed streets and one or two small buildings; was also responsible for irrigation of small orange groves, etc. *TT 1.2: SP 0.7: P 0.5: RC 0.5: D 0.2.* March to Dec. 1924 and Oct. to Dec. 1925 Draftsman, Dept. of Surveys, Miami, Fla. *TT 0.5: SP 0.5.* Jan. to Sept. 1925 Draftsman and April 1926 to March 1927 Draftsman and Asst. to Field Engr., Phoenix Utility Co., Cienfuegos, Cuba, and Ft. Pierce, Fla., map work, etc. *TT 1.1: SP 0.6: P 0.5: D 0.2.* Dec. 1925 to April 1926 Draftsman, Bayshore Co., Jacksonville, Fla. *TT 0.3: P 0.3: D 0.3.* April 1927 to date Asst. Civ. Engr., Yngenio Santa Fe, San Pedro de Macoris, Dominican Republic; work included design of 10-room club-house, with plumbing arrangement, traffic towers, foundation for 40-ton water tank and of various small wooden structures, irrigation and right-of-way maps, calculations for railroad curves, spirals, grades, etc.; also had charge of staking out, planning and construction of two miles of streets, one mile of road and a small sewer system (\$1000) with septic tanks and man-holes (\$500), construction of sidewalks, parks and tennis court, laying out railroad yard, etc. *TT 1.8: P 1.8: RC 0.8: D 1.* *TT 5.4: SP 2.3: P 3.1: RC 1.3: D 1.7.* Refers to S. L. Davis, C. C. English, T. C. Mitchell, G. R. Ramsey. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

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(1) **LEE, ERIK HANSEN**, 867 Union St., Brooklyn, N. Y. (Age 33. Born Aurland Segn, Norway.) 1919 B. S. Bergen Tech. Coll. C. E., Danzig Univ. *TT 4: P 4.* Took concrete courses at Columbia Univ. and Portland Cement Association. Sept. 1913 to Dec. 1915 Carpenter and Concrete Foreman, Norsk Hydro, Rjukan, Norway, and Pyrenees, France, power-station work. *TT 1.2: SP 1.2.* Oct. 1919 to June 1920 Field Engr., Anlaegscompagniet, Oslo, Norway, on building construction. *TT 0.7: P 0.7: RC 0.7: D 0.7.* July to Dec. 1924 Inspector, Delehanty Ferris Co., on bridge construction. *TT 0.4: P 0.4.* March-June 1925 Draftsman with Thompson & Binger, on building construction. *TT 0.3: P 0.3.* July to Nov. 1925 Draftsman, Standard Oil Co. of New Jersey on construction. *TT 0.3: P 0.3.* Nov. 1925 to March 1927 Estimator and Chf. Inspector, Kenn-Well Constr. Co., on power-station work. *TT 1.3: P 1.3.* March 1927 to date Res. Engr., Consolidated Gas Co., on tunnel work and sub foundations. *TT 2: P 2: RC 2. TT 10.2: SP 1.2: P 9: RC 2.7: D 0.7.* Refers to M. E. Chamberlain, C. N. Cleary, E. A. Groves, C. B. Mollineux, W. C. Morris.

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(15) **LEWIS, ALF ALLEN**, 531 Wilson Bldg., Dallas, Tex. (Age 22. Born Kaufman, Tex.) 1928 B. S. in C. E., Tex. Agri. and Mech. Coll. *TT 4: P 4.* July 1928 to date Draftsman with Floyd & Lochridge, Dallas, Tex., on reinforced concrete design and drafting and general drafting for earth dams and concrete spillways. *TT 0.6: P 0.6. TT 4.6: P 4.6.* Refers to O. N. Floyd, J. L. Lochridge, J. T. L. McNew, T. A. Munson, J. J. Richey, C. E. Sandstedt.

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(1) **LOWE, RALPH EDMUND**, 293 East Johnson Ave., Bergenfield, N. J. (Age 26. Born Ridgefield Park, N. J.) Student in Gen. Science, Cooper Union Night School (1921-1923) and in Geology, Columbia Univ. Night School (1925). July 1920 to Jan. 1921 Rodman, Chainman and Draftsman with Rudolph Schweizer, Mun. Engr. and Land Surveyor, Ridgefield Park, N. J. *TT 0.3: SP 0.3.* Jan.-May 1921 Asst. to Chemist, New York Edison Co., Mech. Testing Laboratory, on ash and flue-gas analysis. *TT 0.2: SP 0.2.* June 1921-Oct. 1922 Computer, New York Titie Guarantee & Trust Co., Survey Dept. *TT 0.7: SP 0.7.*

Nov. 1922 to March 1924 with Estimating Dept., National Bridge Works, compiling figures for estimates. *TT 0.7: SP 0.7.* April 1924 to date Land Surveyor and Asst. to C. H. Eckerson, Mun. Engr., since Aug. 1925 in charge of surveys and design of roads and sewers. *TT 4.8: P 4.8: RC 3.5: D 3.5.* *TT 6.7: SP 1.9: P 4.8: RC 3.5: D 3.5.* Refers to C. F. Blood, W. G. Clark, H. W. Edwards, M. Hendee, R. Schweizer, Jr.

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(11) **LOWNES, EDWARD DATESMAN**, 1222 Sixteenth St., Santa Monica, Cal. (Age 27. Born Redlands, Cal.) 1924 B. S. in Eng. and Economics, Cal. Inst. Tech. *TT 4: P 4.* June 1924 to date with City of Los Angeles, Cal., until Dec. 1924 as Topographical Draftsman, Water Dept., then Jun. Civ. Engr., Eng. Dept., designed and had responsible charge of sanitary sewers; since Sept. 1927 on design, Venice Dist. *TT 4.5: SP 0.3: P 4.2: RC 1.3: D 2.8.* *TT 8.5: SP 0.3: P 8.2: RC 1.3: D 2.8.* Refers to E. H. Clarkson, Jr., W. T. Knowlton, J. C. Shaw, R. W. Stewart, A. P. von Deesten.

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(14) **McCOSKEY, DONALD HENRY**, 800 South Eleventh St., Lincoln, Nebr. (Age 27. Born Tekamah, Nebr.) 1925 B. S. in C. E., Univ. of Nebr. *TT 4: P 4.* April to Oct. 1918, May 1921 to Sept. 1922, and June to Aug. 1925 Chainman, Rodman, Levelman, Recorder, Planetableman, Transitman, and Instrumentman, U. S. Reclamation Service and U. S. Bureau of Reclamation. *TT 1: SP 1.* June 1920 to March 1921 Asst. Engr., Great Western Sugar Co., on factory construction, layout, sewer and water systems and machinery. *TT 0.4: SP 0.4.* Aug. 1925 to June 1926 Engr. with E. E. White, Orlando, Fla., on subdivision layout, in charge of clearing, grading, lot layout, etc. *TT 0.9: P 0.9: RC 0.8.* June to Sept. 1926 Asst. Engr., Pass Christian-Chicago Land Co., on lot layout, etc. *TT 0.1: SP 0.1.* Sept. 1926 to Jan. 1929 Auxiliary Engr., The J. G. White Eng. Corporation, S. en C., being Planetable Instructor and in charge of topographical and property surveys on Presa Calles and Rio Conchos projects. *TT 2.3: P 2.3: RC 2.* *TT 8.7: SP 1.5: P 7.2: RC 2.8.* Refers to R. B. Diemer, W. L. Drager, C. C. Elder, C. C. Fisher, J. Hinds, A. M. Shaw, F. E. Weymouth.

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(1) **McNULTY, CARRELL STEWART**, 1304 Teaneck Rd., Teaneck, N. J. (Age 27. Born Washington, D. C.) Sept. 1919 to June 1922 Student in Civ. Eng., Lehigh Univ. *TT 1.5: P 1.5.* July 1922 to Dec. 1923 Draftsman, Pennsylvania R. R., 6 months in drafting room on design, then in charge of survey on five road-crossing bridges, turntable track scale, etc. *TT 1.5: P 1.5: RC 1: D 0.5.* Dec. 1923 to July 1925 not on engineering work. July 1925 to April 1928 Chf. of Party for L. W. Reuter, Jr., City Surveyor, Brooklyn, N. Y., in charge of title surveys, building stakeout. *TT 2.8: P 2.8: RC 2.8.* July 1928 to date Chf. of Party, Teaneck Township, in charge of field party, also office design. *TT 0.7: P 0.7: RC 0.7.* *TT 6.5: P 6.5: RC 4.5: D 0.5.* Refers to C. L. Bogert, R. J. Fogg, A. Noack, J. F. Sanborn, W. G. Whitelaw.

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(14) **MARTIN, CHRISTOPHER CARLOS**, 835 North Main St., Kingman, Kans. (Age 36. Born Ravenswood, W. Va.) 1913 to 1914 student in Eng., Washburn Coll., Topeka, Kans. *TT 0.5: P 0.5.* Jan. 1915 to Jan. 1918 Inspector, one year on bridge over Blue River, Pottawatomie County, Kans., then on bridges and sewers, City of Topeka, Kans., and 1917 in charge of construction of bridges over Blue River (1 year). *TT 2: SP 1: P 1: RC 1.* Jan. 1918 to date (except Sept. 1918 to Jan. 1919 with Eng. Corps, U. S. Army at Ft. Benjamin Harrison, Ind.) County Engr., Kingman County, Kans., in charge of plans and construction of roads and bridges; also June 1925 to date Res. Engr., in charge of surveys, plans and construction of roads and bridges on Federal Aid Projects 245B (\$100 000) and (after Jan. 1927) 341 (\$1 000 000). *TT 10: SP 1.3: P 8.7: RC 8.5: D 3.* *TT 12: SP 2.3: P 9.7: RC 9.5: D 3.* Refers to B. Boyle, R. C. Ham, C. A. Haskins, J. McIntyre, H. A. Rowland, L. R. Tillotson.

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(9) **MATHES, JOHN CHARLES**, 425 Kenilworth Ave., Toledo, Ohio. (Age 22. Born Toledo, Ohio.) 1923 B. S. C. E., Univ. of Mich. *TT 4: P 4.* July 1928 to date Jun. Highway Engr., U. S. Bureau of Public Roads, on economic studies of construction methods and management, etc. *TT 0.6: P 0.6.* *TT 4.6: P 4.6.* Refers to G. H. Binkley, C. K. Cadman, W. C. Hoad, H. W. King, R. L. Morrison, C. O. Wisler.

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(1) **MAYPER, VICTOR**, 15 East Fortieth St., New York City. (Age 38. Born New York City.) 1911 B. S., Coll. of City of N. Y. 1913 S. B., Mass. Inst. Tech. *TT 4: P 4.* 1913 to 1919 Draftsman-Designer, successively with Public Service Comm., designing and inspecting steel structures (over 3 years), New York Central R. R. (1 year), Panama Canal, designing steel and reinforced concrete structures (over 1 year), and Westinghouse, Church, Kerr & Co.

TT 6: P 6. 1919 to date in private practice as Engr. and Archt., New York City; has designed and constructed many steel and reinforced concrete buildings, including factories (10 to 15 stories), office building (14 stories), 2 200-seat theatre and office building, garages (2 and 3 stories), etc. (some named in application); has acted also as Cons. Engr. for two 23-story steel loft buildings, two large theatres, and many garages, as Superv. Engr. in full charge of erection of 2 500-seat theatre, and a 5-story and a 9-story apartment house, and as Archt. and Engr. for numerous alterations, 1, 2 and 4-family dwellings and small factories and warehouses. **TT 9: P 9: RC 9: D 9.** **TT 19: P 19: RC 9: D 9.** Refers to W. A. Back, W. B. Grigsby, J. Meltzer, S. Napp, G. E. J. Pistor, A. I. Raisman.

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(7) MILINOWSKI, ARTHUR SIEGFRIED, 500 Globe Bldg., St. Paul, Minn. (Age 45. Born Berlin, Germany.) 1904 S. B., Lawrence Sci. School, Harvard Univ. **TT 2: SP 2.** Aug. 1904 to May 1906 with Platt Iron Works Co., Dayton, Ohio, Mfrs. of water wheels, pumps, feed-water heaters, etc., as Student Apprentice and (after Jan. 1906) in charge of erection of flumes and turbines at hydro plant, St. Croix Falls, Wis. (2 months) and of tests on new designs of centrifugal pumps (2 months). **TT 1.1: SP 0.7: P 0.4: RC 0.4.** May to Sept. 1906 visiting hydro developments in France, Germany and Switzerland. Oct. 1906-March 1907 Student at shipyard, American Ship Bldg. Co., Lorain, Ohio. **TT 0.3: SP 0.3.** April 1907 to May 1920 with New York State Dept. of State Engr., until Feb. 1908 as Rodman, and later Leveler, and after March 1908 Asst. Engr. on surveys, design and construction of Barge Canal, Western Div., at Rochester, after Oct. 1908 (most of time) in responsible charge of construction. **TT 12.7: SP 0.4: P 12.3: RC 9: D 3.** June 1920 to date member of firm, Druar & Milnowski, Cons. Engrs., St. Paul, Minn., on sewerage, water-works, pavements and sanitation, etc., in Minnesota, Wisconsin, North Dakota, South Dakota, Iowa, Illinois and Upper Peninsula of Michigan; firm also has done hydro-electric and steam power-plant work, and has designed and built a reinforced concrete grain elevator and feed mill and (with an architect) a creamery. **TT 8.5: P 8.5: RC 8.5: D 4.** **TT 24.6: SP 1.4: P 23.2: RC 17.5: D 7.** Refers to O. E. Brownell, W. N. Carey, G. H. Herrold, W. S. Hewett, G. M. Shepard, E. V. Willard, L. P. Wolff.

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(1) MUSKIN, JACOB CECIL, 116 West Seventy-Second St., New York City. (Age 22. Born Vilna, Russia.) 1927 B. S., Mass. Inst. Tech. **TT 4: P 4.** Summer 1926 Estimator and Designer of patented concrete floor construction, Republic Fireproofing Co., New York City. June to July 1927 Jun. Asst. Engr., Grade 1, New York State Highway Comm. Aug. 1927 to May 1928 Estimator, Kilgar Constr. Co., installation of concrete floor slabs on skeleton steel framing, being Gen. Asst. to Executive. **TT 0.4: SP 0.4.** June-Dec. 1928 in charge of estimating Bureau, Fireproofers Credit & Estimating Bureau, on similar work. **TT 0.5: P 0.5.** Jan. 1929 to date Estimator and Sales Engr., Premier Fireproofing Corporation, New York City, installation of concrete floor slabs. **TT 0.1: P 0.1.** **TT 5: SP 0.4: P 4.6.** Refers to W. M. Fife, C. M. Spofford.

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(4) NASON, WALTON HOOKER, Ardmore, Pa. (Age 42. Born Lowell, Mass.) 1911 B. S. in Civ. Eng., Tufts Coll. **TT 4: P 4.** June 1911 to April 1912 Estimator, New York Central and Lehigh Valley R. Rs., on valuation. **TT 0.4: SP 0.4.** April 1912 to April 1913 Rodman and Instrumentman, Erie R. R. **TT 0.5: SP 0.5.** April to Sept. 1913 Instrumentman, and March 1915 to Sept. 1916 Field Engr. at Memphis, Tenn., on investigations and reports on drainage of swamp lands in eastern states, for Morgan Eng. Co. **TT 0.7: SP 0.2: P 0.5: RC 0.5.** Sept. 1913 to June 1914 Instructor, Univ. of Maine, Depts. of Structural Design and R. R. Eng. and Surveying. **TT 0.4: SP 0.4.** June 1914 to March 1915 Chf. of Party, Miami Conservancy Dist., Dayton, on topographic surveys and railroad location. **TT 0.3: SP 0.3.** Sept. 1916 to July 1917 Res. Engr., Colin Gardner Paper Co., Middletown, Ohio, on power-plant construction. **TT 0.8: P 0.8: RC 0.8.** July 1917 to Jan. 1919 Lieut., Constr. Div., Air Service, U. S. Army, in field charge of construction of air service stations. **TT 1.4: P 1.4: RC 1.4.** Jan. 1919 to Sept. 1922 Supt., Sun Shipbuilding Co., Chester, Pa., in charge of ship carpenter work, launchings and floating dry dock pontoon construction. **TT 3.7: P 3.7: RC 3.7.** Sept. 1922 to May 1926 Supt., A. W. Hopeman & Sons Co., Rochester, N. Y., on building construction. **TT 3.8: P 3.8: RC 3.8.** May 1926 to date member of firm, Nason & Cullen, Bldrs. and Engrs., Ardmore, Pa. **TT 3.7: P 3.7: RC 3.7.** **TT 19.7: SP 1.8: P 17.9: RC 13.9.** Refers to G. F. Baker, H. S. Boardman, K. C. Grant, H. S. R. McCurdy, E. H. Maler, A. E. Morgan.

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(15) OROZCO, JOSE VICENTE, Don Martin Camp, Coahila, Mexico. (Age 25. Born Guadalajara, Jalisco, Mexico.) 1925 C. E., Escuela Libre de Ingenieros of Guadalajara. 1924 Recorder and Transitman, Southern Pacific R. R. of Mexico. **TT 0.5: SP 0.5.** Jan. 1925 to April 1926

2d Engr. of Secy. of Agriculture, until 1925 on hydrological work, then on reconnaissance work on Don Martin irrigation project. *TT 1.3: P 1.3.* May to June 1926 and July 1927 to date Engr., National Irrigation Comm., Don Martin Project, Mexico, being Chf. of Party on main canal preliminary location and Engr. in charge of field work and estimates on dam. *TT 2.8: P 2.8: RC 2.8.* *TT 4.6: SP 0.5: P 4.1: RC 2.8.* Refers to R. M. Conner, R. B. Diemer, E. Gomez-Arzapalo, R. A. See, A. Weiss, F. E. Weymouth.

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(11) **PAIGE, CLAYTON WHITNEY**, 5162 Melrose Ave., Los Angeles, Cal. (Age 26. Born Fraser, Iowa.) 1924 B. S. in C. E., Iowa State Coll. *TT 4: P 4.* June 1924 to Aug. 1925 Senior Inspector, Milwaukee Sewerage Comm., in charge of inspection and construction of concrete sewer system. *TT 1.3: P 1.3: RC 0.3.* Sept. 1925 to Nov. 1928 Civ. Engr., Grade III, with Los Angeles County Surveyor, drafting and checking maps, supervising field surveys, establishing property and center lines and section corners. *TT 3.3: P 3.3: RC 1.5.* Nov. 1928 to date Asst. Engr., Harold G. Ferguson Corporation, Los Angeles, Cal., supervising engineering on development of large tracts of land, including subdivision and construction of improvements. *TT 0.2: P 0.2: RC 0.2: D 0.2.* *TT 8.8: P 8.8: RC 2: D 0.2.* Refers to W. L. Foster, W. J. Fox, F. F. Friend, A. H. Fuller, T. C. Hatton, A. Jones, H. M. Jones.

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(14) **PECK, REXFORD ERNEST**, 15 North Newstead St., St. Louis, Mo. (Age 33. Born Idalia, Colo.) Eng. Student, Highland Park Coll., Des Moines, Iowa. (1914 to 1915) and Univ. of Denver (1915 to 1917). June 1917 to Feb. 1919 Draftsman, American Shale Refining Co. and (after Sept. 1917) Western Union Telegraph Co., Denver, Colo. *TT 0.9: SP 0.9.* Feb. 1919 to Nov. 1927 with Denver & Rio Grande Western R. R. Co., until Oct. 1921 as Draftsman and Squad Boss, Valuation Dept., on maps and profiles, then Draftsman and Designer, Bridge Dept., on plans and designs for bridges and roadway structures. *TT 6.9: SP 1.9: P 5: RC 3: D 5.* Nov. 1927 to May 1928 Designer and Checker with Harrington, Howard & Ash, Cons. Engrs., Kansas City, Mo., on railroad and highway cantilever bridges over Mississippi River at Vicksburg, Miss. *TT 0.5: P 0.5: RC 0.5: D 0.5.* May 1928 to date Asst. Engr., Bridge Dept., Missouri Pacific R. R. Co., St. Louis, on designs for bridges and roadway structures. *TT 0.8: P 0.8: RC 0.8: D 0.8.* *TT 9.1: SP 2.8: P 6.3: RC 4.3: D 6.3.* Refers to R. O. Anderson, L. R. Ash, J. S. DeRemer, C. M. Lightburn, A. O. Ridgway, H. C. Tammen.

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(1) **PELLER, JOSEPH PAUL**, 8 Devries Ave., North Tarrytown, N. Y. (Age 28. Born Perth Amboy, N. J.) April 1918 to Sept. 1920, June 1922 to Aug. 1923 with Gen. Motors Corporation, Chevrolet Div., at various plants as Transmittan on surveys, mapping, mechanical and architectural drafting, and (after June 1922) on plant layout surveys and Supt. of Constr. of buildings, conveyors, elevators, etc. *TT 2.4: SP 1.2: P 1.2: RC 1.2: D 1.2.* Sept. 1920 to June 1921 with Interstate Commerce Comm., Central Eastern States, railroad valuation, as Rodman, Chairman and on earthwork computation. *TT 0.4: SP 0.3: P 0.1.* June 1921 to Feb. 1922 with Bronx (N. Y.) Parkway Comm. as Transmittan, and Inspector and Foreman on concrete-asphalt top roads. *TT 0.7: P 0.7.* Feb. to June 1922 with Durant Motors Corporation, Long Island City, on auto plant layout and design and architectural and mechanical drafting. *TT 0.3: P 0.3: D 0.3.* Aug. 1923 to Jan. 1924 with Guarantee Constr. Co., New York City, on design of conveying and elevating machinery and structures for same. *TT 0.4: P 0.4: D 0.4.* Jan. 1924 to Nov. 1925 with New York Edison Co., on design of steel for substations, machinery foundations, ventilating systems. *TT 1.8: P 1.8: D 1.8.* Jan. to June 1926 with G. F. Young, Inc., Davis Island, Tampa, Fla., on design of sewer and water systems, pumping stations, concrete sheet-piling bulkhead. *TT 0.4: P 0.4: RC 0.4: D 0.4.* June 1926 to date Field Engr., National Sugar Refining Co., Long Island City, on property survey, piling and concrete foundations for boiler-house, pile and concrete bulkhead, steel design on new work and maintenance. *TT 2.7: P 2.7: RC 2: D 2.7.* *TT 9.1: SP 1.5: P 7.6: RC 3.6: D 6.8.* Refers to O. B. Bestor, T. R. Galloway, J. R. Losee, C. J. Spear, R. N. Spooner, J. M. J. Walsh.

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(4) **PESCHEL, HARRY WILLIAM**, 456 Ripka Ave., Roxborough, Philadelphia, Pa. (Age 23. Born Philadelphia, Pa.) Sept. 1926 to Feb. 1927 and Feb. to June 1928 student, special course in architecture, Univ. of Pennsylvania. Oct. 1922 to March 1924 Structural Draftsman, American Bridge Co., Pencoyd, Pa. *TT 0.8: SP 0.8.* March 1924 to Sept. 1926 Architectural Draftsman, with Paul Davis-Duniap & Barney, Philadelphia, Pa. *TT 1.3: SP 1.3.* Feb. 1927 to Feb. 1928 and June to Dec. 1928 Architectural Draftsman (Senior) until Sept. 1928 with I. Demchick, assisting on architectural design, then with Sundt & Wenner, Philadelphia. *TT 1.6: SP 0.2: P 1.4.* Dec. 1928 to Jan. 1929 Structural Draftsman, reinforced concrete design, United Engrs. & Constructors, Philadelphia. *TT 0.1: P 0.1.*

Jan. 1929 to date Draftsman (Senior), Reading R. R., Chf. Engr.'s Office, Philadelphia. *TT 0.2: P 0.2. TT 4: SP 2.3: P 1.7.* Refers to H. M. Beaumont, G. A. Cunney, O. H. Gentner, Jr., R. J. Lawrence, E. Pollitt.

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(15) **PETERMAN, LEON ADOLPHUS**, 325 Post Dispatch Bldg., Houston, Tex. (Age 40. Born Dexter, Tex.) Jun. in Civ. Eng., Univ. of Oklahoma. *TT 1: P 1.* Sept. 1909 to June 1916 Chainman, Rodman, Draftsman, Instrumentman, etc., with various concerns. *TT 3.4: SP 3.4.* July 1916 to March 1918 and July 1919 to Oct. 1920 Draftsman, Gulf Pipe Co., Tulsa, Okla., on map drafting, pump station layout, surveys, etc. *TT 2: SP 2.* April 1918 to March 1919 Private, Meteorological Sec., Signal Corps, U. S. Army, 6 months in A. E. F. *TT 0.5: SP 0.5.* April to June 1919 Field Engr., Sun Co., Dallas, Tex., in charge of field party on surveys, etc. *TT 0.1: SP 0.1.* Nov. 1920 to Feb. 1921 Map Draftsman, Cameron County Irrigation Dist. No. 1, Harlingen, Tex. March 1921 to June 1922 Asst. Engr., Cameron County, on location and construction of concrete highways. *TT 0.8: SP 0.8.* July 1922 to March 1923 Asst. County Engr., Gonzales County, Tex., in charge of surveys, plans, and construction of gravel highways. *TT 0.7: P 0.7: RC 0.7: D 0.7.* April 1923 to June 1926 County Engr., Robertson County, Tex., being Engr. on location, surveys, plans, specifications and construction of gravel highways. *TT 3.2: P 3.2: RC 3.2: D 3.2.* July 1926 to Aug. 1927 Field Engr., Marland Oil Co., Ft. Worth, Tex., in charge of lease inventory and valuation in oil fields. *TT 1.1: P 1.1.* Sept. 1927 to date Maintenance Supt., State Highway Dept. of Texas, Houston, Tex., in charge of general maintenance on dirt, shell, gravel, bituminous and concrete highways. *TT 1.3: P 1.3: RC 1.3. TT 1.4.2: SP 6.9: P 7.3: RC 5.2: D 3.9.* Refers to M. C. Burke, T. J. Palm, W. P. Stine, W. O. Washington, G. G. Wickline, R. G. Williams.

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(13) **POULTER, ALFRED FEAREY**, 5433 Arbor Ave., Oakland, Cal. (Age 24. Born Oakland, Cal.) 1927 B. S., Coll. of Civ. Eng., Univ. of Cal. At present Asst. Engr., Comptroller's Office, Univ. of California. *TT 4: P 4.* Refers to H. J. Brunnler, R. E. Davis, C. Derleth, Jr., B. A. Etcheverry, S. T. Harding.

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(15) **RENSHAW, RALPH RAYMOND**, Teague, Tex. (Age 26. Born Decatur, Tex.) 1926 B. S. in C. E., and 1927 M. S. in C. E., Univ. of Tex. *TT 4: P 4.* Oct. 1926 to March 1927 Asst. County Engr., Lubbock County, Tex., field and office work on state highways. *TT 0.5: P 0.5: D 0.5.* April 1927 to Jan. 1928 Draftsman with Harrington, Howard & Ash, Kansas City, Mo., detailing bridges. *TT 0.8: P 0.8.* Feb. 1928 to date with Texas State Highway Dept., until Jan. 1929 as Draftsman, Class A, checking plans and specifications, and since then Res. Bridge Engr., in charge of construction of girder and steel bridges in Freestone County (\$75 000). *TT 1: P 1: RC 1. TT 6.3: P 6.3: RC 0.1: D 0.5.* Refers to J. W. Alger, G. G. Edwards, A. T. Granger, E. E. Pittman, H. C. Tammen, T. U. Taylor, M. C. Welborn.

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(2) **REYNOLDS, RAYMOND EDGAR**, Berwyn, Pa. (Age 44. Born Buffalo, N. Y.) 1906 to 1912 Asst. Div. Engr., M. of W. Dept., New York Central & Hudson River R. R., Rochester, N. Y. *TT 5: SP 1: P 4: RC 4: D 4.* 1912 to 1916 Civ. Engr., Lackawanna (N. Y.) Steel Co., on design and supervision of buildings, sewers, railroads, docks and water supply. *TT 4: P 4: RC 4: D 3.* 1916 to 1918 Draftsman, Pierce Arrow Motor Car Co., Buffalo, N. Y., on design and supervision of concrete and steel buildings, mechanical design, heating, electricity, etc. *TT 2: P 2: RC 2: D 2.* 1918 to 1920 Designing Engr., Aluminum Castings Co., Cleveland, Ohio, on design of concrete, steel, foundries, office buildings, layouts, etc. *TT 2: P 2: RC 2: D 2.* 1920 to 1922 Res. Engr., Lockwood, Green & Co., Cleveland, on supervision of construction. *TT 2: P 2: RC 2.* 1922 to 1923 Sales Engr. at Cleveland, building products. *TT 0.5: SP 0.5.* 1923 to 1925 Asst. Supt., Crowell & Little Constr. Co., Cleveland, handling and buying subcontracts covering excavation, stone and masonry work, electric and mechanical equipment, etc., for buildings, principally engaged as Asst. Supt. on construction of Babies', Children's and Maternity Hospital. *TT 2: P 2: RC 2.* 1925 to 1927 Res. Mgr., Philadelphia office, Wilbur Watson & Associates, Architects and Engrs., Cleveland, on engineering supervision. 1927 to 1928 Engr. and Archt., Cameron (Wis.) Creamery Co., on design and supervision of creamery and milk powder plant and power house. 1928 to date with Wark Co., Bldrs., Philadelphia, on building design, supervision and estimating. *TT 1: P 1: RC 1: D 1. TT 18.5: SP 1.5: P 17: RC 17: D 12.* Refers to G. E. Barrows, J. H. Leech, W. R. Sauter, C. D. Watson, W. J. Watson.

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(5) **RICHARDS, CLIFT RODGERS**, 9 West Irving St., Chevy Chase, Md. (Age 32. Born Centre Montville, Me.) 1922 B. S., Mass. Inst. Tech. *TT 4: P 4.* June 1922 to Jan. 1926 Res. Engr., Stone & Webster, Inc., of Boston, on construction. *TT 3.5: P 3.5.* Jan. 1926 to

Aug. 1927 in charge of design and construction for Bigelow-Hartford Carpet Co., Thompsonville, Conn. *TT 1.6: P 1.6: RC 1: D 1.* Aug. 1927 to date Supt., Masten Constr. Co., New York City, in charge of all outside work and some estimating and designing. *TT 1.5: P 1.5: RC 1.5. TT 10.6: P 10.6: RC 2.5: D 1.* Refers to W. P. Bloecher, E. A. Dockstader, G. E. Russell, W. T. Sitt, C. H. Sutherland.

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(1) RIEGGER, FREDERICK WILLIAM, 114 West 109th St., New York City. (Age 34. Born New York City.) Licensed Prof. Engr., New York State. 1917 C. E., Pol. Inst. of Brooklyn. *TT 4: P 4.* June to Oct. 1917 Draftsman, Commercial Engr.'s Office, American Telephone & Telegraph Co., New York City. *TT 0.2: SP 0.2.* Oct. 1917 to Aug. 1919 with U. S. Army as 2d Lieut., Field Artillery, A. E. F., on reconnaissance, planetable surveying, location of gun positions, plotting, mapping and adjustment of fire; 6 months Instructor, Field Artillery Officers Training School, Saumur, France, and (March to June 1919) student, School of Science, Univ. of Lyons, France. *TT 1.4: SP 0.4: P 1: RC 1.* Oct. 1919 to May 1920 Asst. to Supt., Wm. H. Nichols & Co., Brooklyn, N. Y., manufacturers of foundry equipment, purchasing machinery parts, hardware, etc., preparing sketches for jigs, etc. *TT 0.3: SP 0.3: D 0.1.* May 1920 to date Asst. to Civ. Engr., New York Edison Co., New York City, surveying location of buildings, being Asst. on investigating, designing and supervising construction of plants, office and service buildings, also remodeling and reconstructing plants and buildings, and maintenance of buildings and properties. *TT 8.8: P 8.8: RC 8.8: D 8.8. TT 14.7: SP 0.9: P 13.8: RC 9.8: D 12.9.* Refers to J. L. Bogart, E. W. Borough, C. B. Grady, F. A. Holby, G. A. Orrok, E. M. Van Norden.

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(7) ROTH, WALTER McKINLEY, 1326 Sheehan Ave., Ann Arbor, Mich. (Age 27. Born Lowell, Mich.) 1926 B. S. in C. E., Univ. of Mich. *TT 4: P 4.* June 1922 to Jan. 1923 and April to June 1923 Constr. Supt. on sewage-disposal plant, Northville, Mich. for Denton & Herwig, Gen. Contrs., Saginaw, Mich. and (after April 1923) for Southern Surety Co., Detroit. *TT 0.8: P 0.8: RC 0.8.* Jan. to April 1923 drafting and field work for Hubbel, Hartgering & Roth, Detroit, Mich. *TT 0.2: SP 0.2.* June to Sept. 1923 Field Engr., on sewer construction, Fordson, Mich. *TT 0.1: SP 0.1.* Oct. 1923 to June 1926 (while student) Asst. to Bldgs. and Grounds Engr., and June 1926 to date Bldgs. and Grounds Engr., Univ. of Michigan, on sewer, roads, tunnels, equipment, design and construction. *TT 2.5: P 2.5: RC 2.5: D 2.5. TT 7.6: SP 0.4: P 7.2: RC 3.2: D 2.5.* Refers to J. M. Hartgering, W. C. Hoad, C. W. Hubbell, R. L. Morrison, A. Roth, A. L. Trout, J. S. Worley.

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(5) SCAIFE, WILLIAM McCASLAN, U. S. Coast and Geodetic Survey, Washington, D. C. (Age 31. Born Clinton, S. C.) 1918 B. S. in C. E., Clemson (S. C.) Agri. and Mech. Coll. *TT 4: P 4.* Jan. 1919 to date with U. S. Coast and Geodetic Survey as follows: Jan. to March 1919 in Florida on hydrographic and topographic survey of Biscayne Bay and approaches, being Deck Officer; April 1919 to Feb. 1920 Deck Officer and Aid, Ship *Stalia*, on East Coast; since March 1920 Jun. Hydrographic and Geodetic Engr., until Jan. 1922 with Ship *Surveyor* in Alaska on triangulation topography, computations, etc., 5 months in charge of subparty; Feb. to March 1922 and Jan. to March 1923 in Washington office, on geodetic surveying and field records; April to Dec. 1922, April to Nov. 1923 and April to Oct. 1924 Chf. of first order triangulation party, Idaho, Montana and Interior Alaska; Dec. 1923 to March 1924 and Nov. 1924 to Feb. 1925 at Seattle field station, field records, etc.; March 1925 to Jan. 1926 with Ship *Surveyor* in Alaska, 6 months in charge of steam launch *Cosmos* on reconnaissance and triangulation, then on field records, etc.; March 1926 to Feb. 1927 with Ship *Fathomer*, until April 1926 in command while under repair at Manila, Philippine Islands, then Executive Officer, on hydrographic, topographic and current surveys in Philippine Islands; March 1927 to March 1928 Executive Officer, Ship *Pathfinder* on hydrographic and topographic surveys in Philippine Islands; June to Dec. 1928 with Ship *Explorer* in Alaska, 6 months in charge of launch *Seakist* on reconnaissance, triangulation and topography, made and executed plans to large extent; remainder of time on field records. *TT 9.2: P 9.2: RC 5.4: D 0.7. TT 13.2: P 13.2: RC 5.4: D 0.7.* Refers to W. Bowle, C. L. Garner, E. O. Heaton, C. V. Hodgson, E. H. Pagenhart, H. A. Seran, C. M. Thomas.

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(5) SCHEETZ, FRANK BEATES, 2039 New Hampshire Ave. N. W., Washington, D. C. (Age 61. Born Monroe City, Mo.) 1885 to 1887 student, Missouri State Univ. *TT 1: P 1.* April to Dec. 1884 Chainman with U. S. Deputy Surveyor. *TT 0.4: SP 0.4.* Aug. to Dec. 1887 Slopeman on survey and in charge of party, St. Louis & San Francisco Ry. *TT 0.2: SP 0.2.* Aug. 1888 to Feb. 1889 Rodman and Leveler, Kansas City, El Paso & North Eastern R. R. *TT 0.3: SP 0.3.* April 1889-June 1890 Rodman, July 1890-June 1891 Instrumentman, and July 1891-June 1892 Instrumentman and Cement Tester on construction of drawbridge over

Red River and Engr. in charge of construction of bridge over Little River in Louisiana, all for Missouri Pacific R. R. *TT 1.6: SP 1.6.* July to Dec. 1892 Engr., Missouri, Kansas & Texas R. R., in charge of construction of 15-mile division in Missouri. *TT 0.5: P 0.5: RC 0.5.* Feb. to Sept. 1893 Instrumentman and Draftsman, St. Louis & San Francisco Ry. *TT 0.3: SP 0.3.* Nov. 1893 to June 1910 with M. P. R. R., Pacific and St. Louis, Mo., as follows: Nov. 1893 to 1896 Instrumentman; 1896 to March 1899 Asst. Engr., Bridge and Bldg. Dept., and April 1899 to June 1905 Asst. to Engr. of Bridges and Bldgs., at Pacific, Mo.; July 1905 to Oct. 1906 Engr. of Bridges and Bldgs.; Nov. 1906 to Oct. 1908 Supt. of Bridges; Nov. 1908 to June 1910 Asst. Engr., on special work, supervising construction of new bridges and steam-shovel change of grade work. *TT 15.5: SP 1.2: P 14.3: RC 11.3: D 9.6.* July 1910 to Jan. 1914 Contr. Engr., Kansas City (Mo.) Bridge Co. *TT 3.6: P 3.6: RC 3.6.* Feb. 1914 to date with Bureau of Valuation, Interstate Commerce Comm., until Oct. 1921 as Senior Structural Engr. and Member of Eng. Staff for Western Dist., in charge of inventory, collecting, assembling and pricing railroad bridge and building structures, Kansas City; Nov. 1921 to Oct. 1928 Senior Structural Engr. and Member, Eng. Staff, in charge of computing, collecting, assembling and applying prices to railroad bridges, coaling and water stations, wharves and docks, Washington, D. C.; since Nov. 1928 same duties, also similar work on depots, shop buildings, grain elevators, etc. *TT 15.1: P 15.1: RC 15.1: TT 38.5: SP 4: P 34.5: RC 30.5: D 9.6.* Refers to B. L. Brown, M. L. Byers, J. T. Garrett, G. H. Pegram, H. P. Treadway, C. C. Witt, J. S. Worley.

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(3) **SCHEMAN, CARL HENRY**, Bridgeburg, Ont., Canada. (Age 39. Born Des Moines, Iowa.) 1910 B. S. C. E., and 1918 C. E., Iowa State Coll. *TT 4: P 4.* June to Oct. 1910 Inspector, Iowa State Highway Comm., Ames, Iowa, on reinforced concrete bridge at Forest City, Iowa. *TT 0.2: SP 0.2.* Nov. 1910 to Nov. 1912 Detailer, etc. to Designing Engr., and June to Sept. 1918 Designing Engr., Dept. of Bridges and Bldgs., Illinois Central R. R., Chicago, Ill. *TT 2.3: P 2.3: D 1.8.* Nov. 1912 to June 1917 and Nov. 1917 to June 1918 Asst. to Pres., Iowa State Coll., in charge of planning new buildings and supervising construction with Supt. of Bldgs., also college executive work. *TT 5.1: P 5.1: RC 3.1: D 2.5.* June to Nov. 1917 with Bates & Rogers Constr. Co., in charge of cost accounting, on construction of Camp Grant, Rockford, Ill. *TT 0.5: P 0.5: RC 0.5.* Sept. 1918 to Jan. 1920 Contr. Engr., Chicago (Ill.) Bridge & Iron Works. *TT 1.3: P 1.3: D 1.3.* Jan. 1920 to date with Horton Steel Works, Ltd. (Subsidiary of Chicago Bridge & Iron Works), Bridgeburg, Ont., Canada, until May 1921 as Sales Mgr., at Montreal, Quebec, in charge of design and sales on surge tanks, penstocks, digesters and plate work, then Vice-Pres. and Managing Director, at Bridgeburg, in charge of all operations. *TT 9: P 9: RC 9: D 9.* *TT 22.4: SP 0.2: P 22.2: RC 12.6: D 14.6.* Refers to H. G. Acres, R. L. Hearn, T. H. Hogg, G. T. Horton, A. Marston, M. J. Trees.

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(9) **SCHOENE, CARL WILLIAM**, 1748 East Main St., Columbus, Ohio. (Age 22. Born Columbus, Ohio.) 1928 B. C. E., Ohio State Univ. *TT 4: P 4.* Summer 1927 Rodman and Checker on highway work, with Franklin County (Ohio) Surveyor. June 1928 to date Draftsman, Sewer Dept., Columbus (Ohio) Div. of Eng., plotting field notes, preparing plans, etc. *TT 0.4: SP 0.4.* *TT 4.4: SP 0.4: P 4.* Refers to O. Bonney, C. T. Morris, J. C. Prior, C. E. Sherman, R. H. Simpson.

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(5) **SCOTT, ROBERT HOWARD**, Elec. Bldg., Richmond, Va. (Age 33. Born Richmond, Va.) Registered Engr., State of North Carolina. June 1913 to Jan. 1916 Rodman Norfolk & Western and Chesapeake & Ohio Rys. and (Jan. 1914 to March 1915) Rodman and Instrumentman, Radford-Willis-Southern Ry. *TT 1.3: SP 1.2.* Jan. 1916 to June 1917 Asst. Engr., Bolton, Clarke & Pratt, Civ. Engrs., Richmond, Va., being Chf. of Party on subdivision and Res. Engr. on water and sewer work. *TT 1.1: SP 0.3: P 0.3: RC 0.8.* June 1917 to March 1918 Asst. Engr., Saville & Claiborne, Civ. Engrs., Richmond, in responsible charge of layout and supervision of water and sewer, gravel and concrete roads, etc., at Camp Lee, Va. *TT 0.8: P 0.8: RC 0.8.* March 1918 to March 1919 2d and 1st Lieut., Eng. Dept., Constr. Div., U. S. Army, Camp Lee, being Engr. for Constr. Q. M. in charge of field work, including layout and supervision of construction. *TT 1: P 1: RC 1.* April 1919 to Jan. 1920 Salesman, Asphalt Dept., Texas Co., Richmond, instruction in and inspection of asphalt refinery and laboratory work, also inspection of asphalt pavements under construction. *TT 0.4: SP 0.4.* Feb. to Aug. 1920 Appraiser, E. I. DuPont de Nemours, Hopewell, Va., appraisal and inventory of mechanical equipment at Hopewell Works. *TT 0.5: P 0.5.* Dec. 1920 to Nov. 1922 Res. Engr., North Carolina State Highway Comm., in charge of projects, including draining and grading, concrete paving, concrete base, reinforced concrete bridges and culverts. *TT 1.9: P 1.9: RC 1.9.* Nov. 1922 to Jan. 1928 Engr., Eagle Eng. Co., New Bern, N. C., in charge

of survey, subdivision, municipal and road work, including charge of design and construction of asphalt paving program for Mount Olive, N. C. *TT 5.1: P 5.1: RC 5.1: D 2.* Jan. 1928 to Jan. 1929 Prin. Asst. Engr., Warren Bros. Co., Central Palma, Cuba, in charge of office and field work on construction of Cuban Central Highway, some designing in connection with materials. Jan. 1929 to date Traveling Representative, Allen J. Saville, Inc., engineering construction, Richmond. *TT 1.1: P 1.1: RC 1.1: D 1.1. TT 12.1: SP 1.9: P 11.2: RC 10.7: D 3.1.* Refers to J. Bolton, H. T. Patterson, A. J. Saville, R. E. Snowden, G. C. White.

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(1) SEIFERT, HARRY EMERSON, 160-10 Sanford Ave., Flushing, N. Y. (Age 28. Born Forestport, N. Y.) 1923 C. E., Rens. Pol. Inst. *TT 4: P 4.* July 1923 to Feb. 1924 with W. S. Lozier, Rochester, N. Y. as Transitman and Inspector on sewer construction. *TT 0.3: SP 0.3.* Feb. 1924 to April 1925 with Truscon Steel Co., and April 1925 to date with White Construction Co. of New York City, designing and detailing reinforced concrete. *TT 2.5: SP 2.5: D 1.2. TT 6.8: SP 2.8: P 4: D 1.2.* Refers to R. L. Bertin, M. Birman, F. Leiser.

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(3) SHARP, HOWARD OAKLEY, R. F. D. No. 3, Troy, N. Y. (Age 37. Born Troy, N. Y.) Licensed Prof. Engr. and Land Surveyor, New York State. 1914 C. E., Rens. Pol. Inst. *TT 4: P 4.* June 1914 to Nov. 1915 Asst. Engr. with Solomon, Norcross & Kels, Cons. Engrs., on surveys, design and construction of water-supply system. *TT 1.2: SP 0.4: P 0.3: RC 0.4: D 0.1.* Nov. 1915 to Sept. 1919 with West Side Foundry Co., Troy, N. Y., 1 year as Engr. then Engr. and Mgr., Machine Dept. *TT 3.8: P 3.8: RC 2.3: D 0.5.* Aug. 1920 to Aug. 1921 Foundry Production Engr., Gen. Elec. Co., Schenectady, N. Y., in charge of Grey Iron Foundry production. *TT 1: P 1: RC 1.* Sept. 1919 to Aug. 1920 Instructor, Dept. of Mathematics, drawing and Surveying, Sept. 1921 to June 1926 Instructor in Civ. Eng., and June 1926 to date Asst. Prof. of Geodesy and R. R. Eng., Rensselaer Polytechnic Inst. *TT 8.4: P 8.4: RC 2.6. TT 18.4: SP 0.4: P 18: RC 7.3: D 0.6.* Refers to E. R. Cary, F. J. Kels, T. R. Lawson, P. C. Ricketts, W. W. Rousseau, G. R. Solomon.

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(13) SHAW, JOSEPH, 1320 Alaska Commercial Bldg., San Francisco, Cal. (Age 30. Born Ashton-under-Line, England.) 1926 B. S., Coll. of Mech. Eng., Univ. of Cal. *TT 4: P 4.* May-Aug. 1921 Instrumentman, San Joaquin Light & Power Co., Fresno, Cal. May to Aug. 1922 Asst. to Engr., Standard Oil Co. of California, Bakersfield, Cal., installing new equipment in refinery. May to Aug. 1924 Levelman, Sugar Pine Lumber Co., Pinedale, Cal., logging railroad surveying. Feb. to Aug. 1925 and May 1926 to date with Fred H. Tibbetts, Civ. and Cons. Engr., San Francisco, until Dec. 1926 as Draftsman, 1927 Asst. Engr., 1928 Asst. Office Mgr., and since Jan. 1929 Associate in charge of office design and reports on hydro-electric development in Alaska; work has included drafting, computing, preliminary design of harbor development and tidewater land reclamation, general design of irrigation systems with structures, etc., reports, specifications, estimates, economic engineering investigations, etc., and (1928) design and office work for hydro-electric developments in Nevada County, Cal., and Alaska. *TT 2.9: SP 0.4: P 2.5: RC 1.2: D 1.9. TT 6.9: SP 0.4: P 6.5: RC 1.2: D 1.9.* Refers to R. E. Davis, C. Derleth, Jr., H. R. Howells, C. G. Hyde, F. H. Tibbetts, R. G. Wadsworth.

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(5) SKINNER, GUY BURDETTE, 1448 Park Road N. W., Washington, D. C. (Age 47. Born South Butler, N. Y.) 1907 A. B., Syracuse Univ. *TT 2: P 2.* July 1907 to date with U. S. Lighthouse Service, until Sept. 1926 in office of 3d Lighthouse Dist., Tompkinsville, N. Y., engaged as follows: July 1907 to Oct. 1914 Architectural and Structural Steel Draftsman designing and writing specifications for lighthouse structures on land and submarine sites, involving sheet piling and cribwork, Oct. 1914 to May 1918 Chf. Draftsman on same work, also superintending construction of shops, docks, coal pocket, hoisting tower, powerhouse and machinery, etc.; May 1918 to Sept. 1926 Asst. Supt. designing and superintending design of major construction projects, in charge of surveying parties; since Sept. 1926 Asst. Engr., Constr. Div., Bureau of Lighthouses, Dept. of Commerce, Washington, D. C., acting in advisory and critical capacity for engineering projects of all district offices. *TT 21.7: P 21.7: RC 14.4: D 15.9. TT 23.7: P 23.7: RC 14.4: D 15.9.* Refers to F. P. Dillon, F. C. Hingsburg, F. A. Muth, C. A. Park, G. R. Putnam, R. R. Tinkham.

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(1) SMITH, MARVIN SCHADE, 272 High St., Perth Amboy, N. J. (Age 23. Born Perth Amboy, N. J.) 1926 B. S., Mass. Inst. Tech. *TT 4: P 4.* Summers 1918-1920 Rodman and Chainman, summers 1921-1922 Transitman, and summers 1923 and 1925 Chf. of Party, with Mason & Smith, Perth Amboy, N. J., surveying. Summer 1924 Student, Camp Technology and

Camp Devens, U. S. Army. June 1926 to date Field Engr., with Port Raritan (N. J.) Dist. Comm., on river improvement. *TT 2.6: P 2.6: RC 2.6: D 0.4. TT 6.6: P 6.6: RC 2.6: D 0.4.* Refers to J. B. Babcock, 3d, H. L. Bowman, J. W. Howard, F. L. Smith, C. M. Spofford.

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(2) **STACKPOLE, MINER REGINALD**, 143 Cony St., Augusta, Me. (Age 39. Born Sanford, Me.) 1917 B. S. in C. E., Univ. of Me. *TT 4: P 4.* April to Sept. 1909 Rodman, and summer 1913 Engr. on sewer and pavement design and construction, Town of Sanford, Me. *TT 0.2: SP 0.2.* Sept. 1909 to Jan. 1910 Transitman, Portland Light & Power Co. *TT 0.2: SP 0.2.* Jan. 1910 to Sept. 1911 and Summer 1912 in private practice at Sanford, land surveying and leveling. *TT 0.9: SP 0.9.* Summers 1914 and 1915 on surveys and inspection of, and summer 1916 Res. Engr. on, bituminous macadam road construction, Maine Highway Comm. June 1917 to date with U. S. Geological Survey as follows: June 1917 to July 1919 Jun. Engr., and July 1919 to Oct. 1920 Asst. Engr., Water Resources Div., Boston, Mass.; Oct. 1920 to June 1923 Asst. Engr., co-operating with Maine Water Power Comm., in charge of hydrographic work; July 1923-Aug. 1928 Associate Hydr. Engr. in Maine (Engr.-in-Chg., Water Resources Div., Maine Public Utilities Comm.); since Sept. 1928 Dist. Engr., in charge of Maine Dist. *TT 10.1: SP 1.7: P 8.4: RC 8.4: D 1.3. TT 15.4: SP 3: P 12.4: RC 8.4: D 1.3.* Refers to P. L. Bean, H. S. Boardman, N. C. Grover, J. C. Hoyt, H. B. Kinnison, C. H. Pierce, P. D. Sargent.

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(7) **STARKWEATHER, WALTER HALLETT**, 11645 Pinehurst Ave., Detroit, Mich. (Age 39. Born Milwaukee, Wis.) 1912 Ph. B. in Civ. Eng., Sheffield Sci. School, Yale Univ. *TT 3: P 3.* Certificate from Univ. de Besancon, France. June 1912 to Nov. 1917 Rodman, Draftsman, Instrumentman, Chf. of Party, Asst. Engr. and Engr. in Chg. of Constr. with Albert B. Hill, Cons. Engr., New Haven, Conn., on municipal, sanitary, water-supply engineering and construction, etc. *TT 3.9: SP 1.6: P 2.3: RC 1.9: D 0.4.* Nov. 1917 to May 1920 Private to Master Engr., Senior Grade, 26th U. S. Engrs. (Water Supply), Office of Chf. Engr., A. E. F. (1½ years), mapping and designing water and sewer systems, Hospital 52, Rimaucourt; Prin. Asst., administration of water-supply material, A. E. F. *TT 1.8: SP 0.5: P 1.3: RC 0.9: D 0.2.* May to Nov. 1920 Civ. Engr., Special Agt., U. S. Census of Drainage, U. S. Bureau of Census, Washington, D. C., on completion of census drainage of agricultural lands in northeastern Indiana and northwestern Ohio. *TT 0.5: P 0.5: RC 0.5.* Dec. 1920 to May 1921 Camp Draftsman, Interstate R. R. Co., Norton, Va., on location, mapping, etc. *TT 0.3: SP 0.2: P 0.1: D 0.1.* June 1921 to June 1922 in private practice of civil engineering, drafting, etc.; also Instructor in Civ. Eng., George Washington Univ., Washington, D. C. (night courses). *TT 1: P 1: RC 0.5: D 0.1.* July 1922 to May 1926 Dist. Constr. Engr., Ninth Dist., U. S. Coast Guard, Washington, D. C., at Detroit, Mich., in charge of construction and repair work for life-saving stations on Lakes Ontario, Erie and Huron and (part of time) on all Great Lakes, preliminary surveys, reports, estimates, designs, purchases and supervision. *TT 3.7: P 3.7: RC 3.7: D 2.* May 1926 to date with City Engr.'s Office, Dept. of Public Works, Detroit, until July 1926 as Chf. of Field Party, then Engr. of Surveys, in charge of parties on field engineering, including public and lateral sewer construction, street and alley paving, opening and widening, topographical surveys and investigations. *TT 2.7: P 2.7: RC 2.4. TT 16.9: SP 2.3: P 14.6: RC 9.9: D 2.8.* Refers to C. T. Bishop, C. M. Blair, P. A. Fellows, J. P. Hallihan, A. B. Hill, J. W. Reid, J. C. Tracy, J. H. Wasson,

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(7) **STEINHAGEN, RUDOLPH ALOY**, 606 Fifty-Sixth St., Milwaukee, Wis. (Age 35. Born Wauwatosa, Wis.) 3 years student in Civ. Eng., Marquette Univ., Milwaukee, Wis. *TT 1.5: P 1.5.* Summers 1910 to 1913 Rodman, Chainman and Instrumentman, T. M. E. R. & I. Co. and with G. Steinhagen, Civ. Engr., Milwaukee. 1914 to 1916 Res. Engr., City of Cudahy, Wis., in charge of construction of main sewer (tunnel). *TT 1.8: SP 0.8; P 1: RC 1: D 1.* 1916 to 1917 in private practice of engineering, County Surveyor of Milwaukee, Cons. Engr. for Cudahy and South Milwaukee, Wis. *TT 1.2: P 1.2: RC 1.2: D 0.5.* 1917 to 1919 with 29th Engrs., A. E. F., on flash-ranging, surveying, etc. *TT 0.7: SP 0.7.* 1919 to 1921 Div. Engr., San. Dist. of Chicago, in charge of party on topography and sanitary engineering work. *TT 1.3: SP 0.5: P 0.8: RC 0.8: D 0.8.* 1921 to 1924 Field Engr., Portland Cement Association, eastern Wisconsin. *TT 1.5: SP 1.5.* 1924 to date senior member of firm, Steinhagen & Steinhagen, general engineering work; Cons. Engrs. for City of Cudahy, Town of Wauwatosa, having charge of all water and sewer work; also Cons. Engr. for Catholic Archdiocese of Milwaukee, platting and developing addition to a cemetery (approx. 150 acres) and in charge of planning and developing in all Catholic cemeteries in Milwaukee County; 1928 designed storm sewer system for Cudahy (estimated cost \$1 000 000); since 1928 member of City Council, Milwaukee, Vice-Chairman of Street, Alley and Sewer Com-

mittee; at present on plans for sewers and water in several subdivisions (about 560 acres). *TT 4: SP 1: P 3: RC 3: D 3. TT 12.1: SP 4.5: P 7.6: RC 6.1: D 5.3.* Refers to B. E. Brevik, R. R. Lundahl, G. W. Rauch, J. P. Schwada, M. W. Torkelson, F. W. Ullius.

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(13) STEPHENSON, LOWELL JOSEPH, 3764 Howe St., Oakland, Cal. (Age 29. Born Wellston, Ohio.) Oct. 1920 to April 1921 and Jan. to April 1922 student, Stanford Univ. *TT 0.5: P 0.5.* June to Aug. 1919 Axeman and Rodman, Southern California Edison Co. *TT 0.1: SP 0.1.* Aug. 1919 to Oct. 1920 Chainman and Rodman; April 1921 to Jan. 1922 Transitman and (4 months) Mechanic and Subforeman on substation construction and reconstruction; April 1922 to Jan. 1923 Foreman in charge of placing concrete footings for steel flumes, later Reinforcing Steel Foreman on concrete flumes, also line and grade for forms and trestles, and June 1923 to March 1924 Transitman on alignment and grade, power ditch, flumes and tunnels reconstruction, stream gauging, all for San Joaquin Light & Power Corporation. *TT 2.3: SP 1: P 1.3.* March to June 1923 with Julia Morgan, Archt., San Francisco, as Inspector on building construction. *TT 0.1: SP 0.1.* April to Sept. 1924 with Pacific Portland Cement Co., Redwood City, Cal., as Asst. Engr. in charge of main mill building and wharves construction, later Constr. Foreman in charge of carpenters, painters, concrete, tinmiths, etc. *TT 0.4: P 0.4: RC 0.2.* Jan. to Dec. 1925 various short engagements with Bent Bros. at Exchequer Dam, Association Oil Co., Avon Refinery, Inspector, concrete piles, Dumbarton Highway Bridge, Asst. Supt., Austin Co. of California, transmission line and land surveys, Pacific Gas & Elec. Co. *TT 0.5: SP 0.5.* Dec. 1925 to April 1926 Transitman, Shell Oil Co., Martinez Refinery, on maintenance and construction of cracking plants, laying out foundation, pipe lines, surface, oil and fire drains. *TT 0.1: SP 0.1.* April to Dec. 1926 Chf. of Party, Great Western Power Co., Big Meadows, Cal., on base line survey for Lake Almanor topography, also on road, intake construction, channel dredging and camp surveys. *TT 0.7: P 0.7.* Dec. 1926 to date with Thebo, Starr & Anderton, Inc., San Francisco, as Asst. Field Engr. on construction of 20 000-h.p. full automatic power house, penstock and dam at Port Angeles, Wash., Glines Canyon Project, being Field Engr. on dam repair and power house foundations, and Asst. Engr. on power and water-supply investigations and surveys, estimates and reports. *TT 2: P 2: RC 0.3. TT 6.7: SP 1.8: P 4.9: RC 0.5.* Refers to F. M. Cortelyou, H. H. Ferrebee, H. K. Fox, M. J. Hvorslev, W. B. McMillan, F. M. Thebo.

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(6) STEWARD, JOHN LAWRENCE, Box 2, R. F. D. No. 1, Charleston, W. Va. (Age 45. Born North Anson, Me.) Registered Engr., State of West Virginia. 1908 to 1913 with various engineers in Colorado on map, irrigation and mining work, 1 year in charge of party on field layout of irrigation project. *TT 3: SP 2: P 1: RC 1.* 1913 to 1916 private practice in Virginia, farm building design and construction and drainage, etc. 1916 to 1919 with Houston Coal Co., Cincinnati, Ohio, one year as Office Man at Elkhorn, W. Va., on maps, designing houses (about 100) including brick bungalow (about \$50 000), also on design of a power plant; last 1½ years Res. Engr., Carswell Plant, supervised construction of above work, including two school houses, a church, power- and boiler-houses (stone) with B. & W. boilers, water-treating and pre-heating plant, automatic stoker and ash conveyor, stone warehouse, etc.; made survey of two mines, etc. *TT 2.5: SP 0.5: P 2: RC 2.* 1919 to date with United Gas Fuel Co., Charleston, W. Va., on gas and oil production, mapping pipe-line layout, inventories, reports, etc. in charge of surveys, abstractors, mapping, etc., on Samuel Smith Surveys (about 500 000 acres), and other map work. *TT 10: P 10: RC 10: D 10. TT 15.5: SP 2.5: P 13: RC 13: D 10.* Refers to J. K. Anderson, G. H. Hill, C. M. Ross, W. D. Sell, P. J. Walsh.

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(7) STOCKING, ERNEST JOSEPH, 310 Dakota St., Vermillion, S. Dak. (Age 35. Born Montreal, Que., Canada.) 1923 B. S. in Civ. Eng. and 1925 M. S. in C. E., Iowa State Coll. *TT 4: P 4.* Summer 1921 Rodman, summers 1922 and 1923 Instrumentman and summer 1926 Chf. of Party on paving, with City of Ames, Iowa. *TT 0.5: P 0.5: RC 0.2.* 1923 to spring 1927 Instructor in, and spring 1927 to date Asst. Prof. of Civ. Eng., Univ. of South Dakota, summers 1924 and 1925 graduate student, summers 1927 and 1928 Engr. on gravel survey, South Dakota Highway Dept.; also some consulting work on surveys and small farm drain systems, engineering work on Clay County highway, etc. *TT 4.7: P 4.7: RC 2 TT 9.2: P 9.2: RC 2.2.* Refers to T. R. Agg, J. M. Brown, H. S. Carter, R. A. Caughey, A. H. Fuller, J. H. Griffith, P. F. Hopkins.

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(4) STOLL, JAY HOSTETTER, 918 North Eighteenth St., Harrisburg, Pa. (Age 29. Born Florin, Pa.) 1922 B. Sc., Pa. State Coll. *TT 4: P 4.* Summers 1916 and 1917 Timekeeper and Inspector for contractors and engineers. June to Aug. 1922 Inspector, Pennsylvania

State Highway Dept., on grading and building. *TT 0.1: SP 0.1.* Sept. 1922 to Sept. 1924 with American Bridge Co., until Nov. 1922 as Fitterup on fabrication of columns, small trusses, girders, etc., then Detailer, Eng. Dept., on design and detail of beams, columns, etc., building and bridge structures, and after Nov. 1923 Asst. Engr., Foreign Erection Dept., on erection of railroad bridge, Montevideo, Uruguay. *TT 1.7: SP 0.1: P 1.6: RC 1.6: D 0.8.* Oct. 1924 to date with Gannett, Seelye & Fleming, Engrs., Inc., until May 1925 as Res. Engr. on construction of water-works and filter plant, supply and intake pipe line, then Field Engr. on construction of impounding reservoir, earth fill, concrete core wall (70 ft. high, 110 000 000 gal.) and since March 1926 Appraisal Engr. on reports and appraisals on electric, water, gas and public utilities. *TT 4.5: P 4.5: RC 4.5: D 0.2. TT 10.3: SP 0.2: P 10.1: RC 6.1: D 1.* Refers to P. B. Breneman, W. H. Condry, R. L. Sackett, E. D. Walker, F. H. Weed.

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(4) **TALMADGE, EZRA EDWIN**, 6901 Elmwood Ave., Philadelphia, Pa. (Age 46. Born Ft. Ann, N. Y.) 1908 C. E., Syracuse Univ. *TT 4: P 4.* Sept. 1908 to Jan. 1910 Constr. Engr., New York State Rys., Syracuse, N. Y., designing, engineering, supervision and inspection, building construction. *TT 1.3: P 1.3.* 1918 to Feb. 1919 with U. S. Army as Capt. Constr. Div., acting as Asst. to Constr. Q. M., Richmond (Va.) Bag-Loading Plant, then Major, acting as Q. M. in charge of work at Dayton, Ohio. Jan. 1910 to date (except 1918 to Feb. 1919) with Gen. Elec. Co., Schenectady, N. Y., engaged as follows: Jan. 1910 to April 1912 Inspector of construction, Grounds & Bldgs. Dept., Schenectady Works; April 1912 to May 1913 on appraisal of buildings at various plants; 1913 to 1915 Res. Engr. in charge of construction of factory buildings for Edison Lamp Works, supervised construction of buildings and installation of wiring, piping and manufacturing machinery; 1915 to 1918 Appraisal Engr. in charge of field work in appraising plants; 1920 and 1921 special investigations and appraisals; 1922 to 1924 in charge of designs and construction of Company's Oakland (Cal.) Works, including KGO Broadcasting Station; 1924 to April 1927 Asst. Supt., Grounds & Bldgs. Dept. at Schenectady, having general supervision of design and construction of all new work and maintenance; since April 1927 Supt. of Grounds & Bldgs. Dept., Philadelphia Works. *TT 18: P 18: RC 14: D 5. TT 23.4: P 23.4: RC 14: D 5.* Refers to D. A. Allee, H. S. Jacoby, F. P. McKibben, L. Mitchell, G. H. Shaw.

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(11) **TAMMINGA, JOHN SIMON**, 412 Tramway Bldg., Denver, Colo. (Age 31. Born Sayville, N. Y.) 1922 B. S. C. E., Univ. of Colo. *TT 4: P 4.* 1922 to date with his brother, Wm. Tamminga, Gen. Contr., Denver, Colo., managing office, estimating work, designing concrete forms and plant layouts, sketching, listing and purchasing materials, letting subcontracts, etc., at times (total about 1 year) directed entire organization; construction included West High School (\$1 400 000) and Smiley Jun. High School (\$400 000) and Regis Coll. Dormitory (\$200 000), all in Denver; Greeley (Colo.) High School (\$300 000) and an elementary school in Brush (\$180 000), etc. *TT 6.6: P 6.6: RC 1: D 6.6. TT 10.6: P 10.6: RC 1: D 6.6.* Refers to O. W. Childs, I. C. Crawford, F. R. Dungan, N. W. Funk, A. S. Horner, R. G. Shankland, W. R. Weber.

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(15) **TEIS, KENNETH ROBERT**, City Hall, Tulsa, Okla. (Age 30. Born Platte City, Mo.) 1923 B. S. in C. E., Mo. School of Mines. *TT 4: P 4.* May 1920 to Jan. 1921 with Illinois Dept. of Highways, until Sept. 1920 as Highway Inspector on drafting and highway maintenance, then Jun. Testing Engr., on materials inspection and testing. *TT 0.3: SP 0.3.* July 1922 to May 1923 Draftsman, Computer and on design, Tulsa County, Okla. *TT 0.8: P 0.8: D 0.2.* May to Aug. 1923 Transitman, St. Louis & San Francisco R. R. *TT 0.3: P 0.3.* Aug. 1923 Project Engr., Creek County, Okla., on highway construction. *TT 0.1: P 0.1: RC 0.1.* Sept. 1923 to Oct. 1925 Office Engr., Tulsa County, Okla., estimates, computations, design and drafting. *TT 2.1: P 2.1: RC 2.1: D 1.* Oct. 1925 to April 1928 with Independent Oil & Gas Co., until Feb. 1926 as Asst. Engr., on design and drafting, then Chf. Engr. in charge of engineering, design and construction on refinery pipe line, production and natural gas. *TT 2.5: P 2.5: RC 2.2: D 1.8.* May 1928 to Jan. 1929 Purchasing Agent, and Jan. 1929 to date City Engr., Tulsa, Okla. *TT 0.8: P 0.8: RC 0.8. TT 10.9: SP 0.3: P 10.6: RC 5.2: D 3.* Refers to V. H. Cochrane, E. G. Harris, C. V. Mann, D. W. Patton, D. Witten, E. N. Wood.

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(7) **TETER, DONALD STAMM**, 220 Fourteenth St., Milwaukee, Wis. (Age 28. Born Sioux City, Iowa.) 1923 B. S., Iowa State Coll. *TT 4: P 4.* June 1923 to Feb. 1927 Engr. Inspector, Milwaukee (Wis.) Sewerage Comm., being Inspector and Instrumentman on concrete tunnel construction, Res. Engr. on tunnel and open-cut intercepting sewers, Chf. of Party on surveys, and Senior Engr. acting as Res. Engr. on supervision of construction,

material inspection, surveys, reports and estimates on \$350 000 intercepting sewer in compressed air tunnel. *TT 3.3: SP 0.5: P 2.8: RC 2.8: D 2.* March to June 1927 Field Engr., Macomb County Drain Comm., Mt. Clemens, Mich., in charge of construction on storm- and sanitary-sewer contract, and Chf. of survey party. *TT 0.3: P 0.3: RC 0.3.* July 1927 to Feb. 1928 Res. Engr., San. Dept., Pontiac, Mich., on street widening project; Asst. Engr. of Dept., supervising construction and surveys, preparing estimates and special designs and making final inspection on sewer contracts (open-cut and tunnels, diameter 8 to 96-in.). *TT 0.7: P 0.7: RC 0.7: D 0.7.* March 1928 to date Field Supervisor of street construction and repairs, Milwaukee, Wis., in charge of pavement construction, special investigations. *TT 1: P 1: RC 1: D 1.* *TT 9.3: SP 0.5: P 8.8: RC 4.8: D 3.7.* Refers to C. A. R. Distelhorst, A. H. Fuller, R. W. Gamble, A. Marston, J. R. Pollock, D. W. Townsend, G. R. Young.

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(1) **THATCHER, JOHN HOWARD**, 60 Park Ave., Brooklyn, N. Y. (Age 23. Born Brooklyn, N. Y.) 1925 B. S., and 1926 C. E., Princeton Univ. *TT 4: P 4.* Sept. 1925 to June 1926 Graduate Student, Princeton Univ., and ($\frac{1}{2}$ year) Instructor in Surveying. Sept. 1926 to April 1928 Draftsman and Designer, New York Central R. R., making plans and layouts for station platforms, power houses, subsurface facilities and passageways. *TT 1.1: SP 0.5: P 0.6: D 0.6.* April 1928 to date Supt., John Thatcher & Son. *TT 0.8: P 0.8: RC 0.8.* *TT 5.9: SP 0.5: P 5.4: RC 0.8: D 0.6.* Refers to G. E. Beggs, F. H. Constant, H. Fougner, G. A. Noren, F. N. Willson.

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(9) **TOOLEY, WILLIAM PAUL**, 211 Lowe Bldg., Dayton, Ohio. (Age 23. Born Troy, Ohio.) 1928 B. C. E., Ohio State Univ. *TT 4: P 4.* Summers 1925 and 1926 with C. E. Brown, in charge of laying reinforcing steel in concrete buildings, and on concrete work. Summer 1927 Draftsman, Paving Dept., City Eng. Dept., Toledo, Ohio. Summer 1928 and Dec. 1928 to date Supt. of Constr., A. P. Ziegler, Inc., Bldg. Contrs., Dayton, in charge of outside work. *TT 0.2: P 0.2: RC 0.2.* *TT 4.2: P 4.2: RC 0.2.* Refers to C. T. Morris, J. C. Prior, J. R. Shank, C. E. Sherman, R. C. Sloane.

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(8) **UEBELE, GEORGE FREDRIC**, 3430 Monroe St., Chicago, Ill. (Age 22. Born Chicago, Ill.) 1927 B. S. in Civ. Eng., Armour Inst. Tech. *TT 4: P 4.* Aug. 1927 to date Draftsman, American Bridge Co., Chicago, Ill. *TT 1.4: P 1.4.* *TT 5.4: P 5.4.* Refers to J. R. Griffith, H. Penn.

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(1) **VOLLMER, WILLIAM HUMBOLDT JORDAN**, 210 West 101st St., New York City. (Age 37. Born New York City.) Licensed Prof. Engr., New York State. Jan. 1913 to date (except 2 years with U. S. Army) Asst. Engr., Eng. Dept., Thomas Crimmins Contr. Co., Gen. Contrs. and Engrs., New York City, on foundations for buildings and structures, sewers, pipe lines, conduits, etc., for private and public work; work has covered bldgs, design of plant layout, field layouts and in charge of construction, etc.; past ten years has been in charge of construction of foundations or acted in responsible advisory capacity on various buildings, including George A. Fuller, Consolidated Gas Co., Harriman, New York Telephone, Paramount, Equitable Life Assurance Soc., Astoria Telephone, Pershing Square and Bowery Savings Bank Bldgs., Rockefeller Institute, Riverside Church, Savoy Plaza Hotel and to R. H. Macy Co. additions, etc. *TT 12.5: SP 1.5: P 11: RC 6.* Refers to R. A. Backus, F. N. Benedict, A. H. Jorgensen, C. R. Krieg, E. F. Robinson, F. A. Snyder.

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(11) **WADDELL, THOMAS BRAINARD**, 217 $\frac{1}{2}$ Buffalo Ave., Santa Ana, Cal. (Age 38. Born Mercersburg, Pa.) 1912 B. S. in Civ. Eng., Univ. of Cal. *TT 4: P 4.* Sept. 1912 to July 1913 Asst. Engr. with Haviland, Dozier & Tibbetts, San Francisco, Cal., on investigations and design of works for drainage, flood control and reclamation. *TT 0.8: SP 0.1: P 0.7: RC 0.5: D 0.2.* Aug. 1913 to Dec. 1917 Asst. Flood Control Engr., Dept. of Eng., California, in charge of office work on plans for flood-control systems for Sacramento and San Joaquin Valleys, Cal., including analyses for channel capacities, plans, specifications and estimates for parts of flood-control system, and construction work on levees. *TT 4.4: P 4.4: RC 4.4: D 2.5.* Jan. 1918 to March 1923 Prin. Asst. Engr., Reclamation Board of California, in immediate charge of engineering and construction work on plans, estimates and construction of levees, levee and bank-protection, drainage systems, pumping plants and bridges, also approval of plans for private reclamations. *TT 5.2: P 5.2: RC 5.2: D 3.* April to Dec. 1923 Div. Engr., Western States Gas & Elec. Co. (Byllesby Eng. & Management Corporation), in charge of field engineering on construction of 25 miles of mountain canal for power project, including large inverted siphons, canal lining and structures and log-crib diversion dam. *TT 0.7: P 0.7: RC 0.7.* Jan. 1924 to June 1925 Asst. Hydr.

Engr., Byllesby Eng. & Management Corporation, making investigations and preliminary reports on water power possibilities of all streams in Oklahoma *TT 1.5: P 1.5: RC 1.5: D 0.2.* Aug. 1925 to Sept. 1927 Hydr. Engr., Div. of Eng. and Irrigation, Dept. of Public Works, California, on investigations of water resources of state, in charge of layouts and cost estimates for reservoirs, dams, power plans and tunnel diversions of streams. *TT 2.1: P 2.1: RC 2.1: D 1.5.* Sept. 1927 to date Prin. Asst. Engr., Orange County Flood Control Dist., California, in charge of office work and field parties on plans for flood control by reservoirs, including hydraulic studies, layouts and cost estimates for reservoirs, dams, spillways and railroad and highway relocations. *TT 1.4: P 1.4: RC 1.4: D 1. TT 20.1: SP 0.1: P 20: RC 15.8: D 8.4.* Refers to P. Bailey, E. N. Bryan, M. Dozler, Jr., B. A. Etcheverry, H. B. Hamcill F. C. Herrmann, W. B. Rittenhouse.

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(8) WADDINGTON, WILLIAM HOLT, 5 North LaSalle St., Chicago, Ill. (Age 43. Born Manchester, England.) Prior to 1917 (10 years) various work with engineering and construction companies. 1915 to 1917 Field Supt., Leonard Eng. Co. *TT 2: P 2: RC 2.* 1917 to 1918 Foreman and Asst. Supt., Mueller Constr. Co. *TT 1: P 1: RC 1.* 1918 to 1920 Gen. Supt., Clark-Smith Constr. Co. *TT 2: P 2: RC 2.* 1920 to 1922 Gen. Mgr., Summerbell Truss Co., being Supt. in field, checking materials, inspecting, etc. *TT 2: P 2: RC 2.* 1922 to date Gen. Mgr., American Roof Truss Co.; work includes checking structural details, inspecting larger installations, demonstrating construction and having details approved by Bldg. Commrs. in various towns, etc. *TT 7: P 7: RC 7. TT 14: P 14: RC 14.* Refers to H. F. Doerr, A. Epstein, W. F. Krahel, G. A. Nordgren, F. A. Randall.

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(10) WANZER, CHARLES TICE, Care, Duke Power Co., Charlotte, N. C. (Age 39. Born Ithaca, N. Y.) 1913 C. E., Cornell Univ. *TT 4: P 4.* June 1911 to Feb. 1912 Instrumentman and Draftsman on layout and construction of athletic field, and June to Oct. 1912 Chf. of Party on surveys for and Draftsman on official map of buildings and properties, Cornell Univ. *TT 0.6: SP 0.6.* March to May 1912 San. Inspector, New York State Board of Health, on investigation of sewage pollution of oyster beds in Jamaica Bay, New York. *TT 0.2: SP 0.2.* July 1913 to May 1914 with Baltimore Sewerage Comm., as Instrumentman on construction of sewage-disposal plant and Inspector on construction of sewers. *TT 0.9: P 0.9.* June to Oct. 1914 Res. Engr., City of Clearfield, Pa., on construction of new spillway and core wall for existing earth dam impounding water supply. *TT 0.4: P 0.4: RC 0.4.* Jan. to March 1915 Draftsman, Central New York Southern R. R., on design of small structures, retaining walls, tanks, coal pockets and yards. *TT 0.2: P 0.2: RC 0.2: D 0.2.* April to Dec. 1915 Draftsman, Buffalo Office, International Joint Comm., preparing reports on alleviation of sewage pollution of boundary waters, design of additional sewers, treatment plants, etc., for Buffalo and nearby cities. *TT 0.8: P 0.8: D 0.3.* Feb. 1916 to Dec. 1917 Chf. of Party, New England Power Co., on hydraulic surveys along Deerfield River in Massachusetts and Vermont; Res. Engr. on construction of substation; Asst. to Hydr. Engr. on water-power studies, system operation, etc. *TT 1.9: P 1.9: RC 1: D 0.9.* Jan. 1918 to date with Duke Power Co. and subsidiaries, as Asst. Res. Engr., Res. Engr., and Res. Engr. and Supt. and since Aug. 1927 Div. Engr. on construction of hydro and steam plants (32 000 to 94 000 h.p.), at present on 150 000-h.p. steam plant. *TT 11: P 11: RC 9. TT 20: SP 0.8: P 19.2: RC 10.6: D 1.4.* Refers to A. A. Conger, F. H. Cothran, E. A. Dow, A. C. Eaton, A. C. Lee, W. S. Lee, G. J. Requardt, F. C. Tolles.

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(15) WHEATLEY, ARTHUR CORNWALLIS, Jr., Apt. 8, C. Camargo, Chihuahua, Mexico. (Age 28. Born Saitillo, Coahuila, Mexico.) 1923 M. E., Tex. Coll. of Mines. 1923 to 1924 Jun. Office Engr., Magma Copper Co., Superior, Ariz., acting as Calculator, Steel and Plan Checker, Photographer and Gen. Utilityman on construction. *TT 0.4: SP 0.4.* June 1924 to April 1927 Draftsman, later Chf. of Party, City of El Paso, Tex. *TT 2.6: SP 0.3: P 2.3.* April 1927 to date with Cia. Agricola y de Fuerza Electrica del Rio Conchas, S. A., Chihuahua, Mexico, 3 months as Chf. of Party on exploration, then Civ. Engr. in charge of design and construction of minor works, hydraulic data, etc. *TT 1.6: SP 0.1: P 1.5: RC 1.5: D 0.3.* *TT 4.6: SP 0.8: P 3.8: RC 1.5: D 0.3.* Refers to R. P. Anderson, V. L. Sullivan.

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(11) WHEELER, HERBERT AUSTEN, 1144 South Grand Ave., Los Angeles, Cal. (Age 25. Born Oakland, Cal.) Jan. to Oct. 1920 with Paul E. Jeffers as Draftsman and on inspection, concrete and steel structures. *TT 0.3: SP 0.3.* Oct. 1920 to Jan. 1926 Draftsman and Designer, and May to Sept. 1928 Designer, Draftsman and Inspector with O. G. Bowen, on concrete and steel structures, etc., part of time in charge of field inspection of Sears, Roebuck & Co.'s store, Hollywood. *TT 3.3: SP 1.6: P 1.7: RC 0.7: D 2.1.* Jan. 1926 to Nov. 1927 Designer and Draftsman with Erick & DeLine, on structural engineering. *TT 1.5:*

SP 0.6: P 0.9: RC 0.7: D 0.7. March to May 1928 with Samuel Evans, as Designer on a concrete apartment house. *TT 0.2: P 0.2: RC 0.2: D 0.2.* Sept. to Oct. 1928 with H. J. Knauer, Archt., as Designer of 6-story office building. *TT 0.1: P 0.1: RC 0.1: D 0.1.* Oct. 1928 to date with Elliott, Bowen & Walz, as Designer and Draftsman on structures. *TT 0.3: P 0.3: RC 0.2: D 0.2.* *TT 5.8: SP 2.6: P 3.2: RC 1.9: D 3.3.* Refers to S. B. Barnes, O. G. Bowen, J. R. Elliott, R. E. Marvin, E. M. Scofield.

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(10) **WORLEY, HUGH, Jr.,** Kosciusko, Miss. (Age 26 Born Oxford, Miss.) 1924 B. E., Univ. of Miss. *TT 4: P 4.* July 1924 to date with Massena L. Culley, Cons. Engr., Jackson, Miss., as follows: July 1924 to March 1925 Res. Engr. supervising construction of concrete paving and storm sewers and design and construction of extensions to water-works and sanitary sewer systems, Water Valley, Miss. (total supervision \$100,000); March to May 1925 Asst. Engr. on surveys, plans and designs for street paving, sanitary and storm sewers (\$750 000), Natchez, Miss.; since May 1925 Res. Engr. supervising construction of paving, storm sewers and extensions to water-works and sanitary sewer systems, Winona, Miss. (\$350 000) (2 years), on design and supervision of construction of street paving and storm sewer system, Durant, Miss. (\$100 000) (3 months), and (since Aug. 1927) designed and supervised construction of sanitary sewer system, including pumping plant and water-works system, also designed and at present constructing street paving and storm-sewer system, Kosciusko, Miss. (total \$328 000). *TT 4.7: P 4.7: RC 4.7: D 2.7.* *TT 8.7: P 8.7: RC 4.7: D 2.7.* Refers to M. L. Culley, J. H. Dorroh, W. S. Hawkins, P. C. Klyce, W. H. Rhodes, H. D. Shaw.

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(1) **WRIGHT, LAWRENCE FREDERICK,** 443 Seventy-Third St., Brooklyn, N. Y. (Age 30. Born Brooklyn, N. Y.) 1921 B. S. in C. E., Catholic Univ. of America. *TT 4: P 4.* July 1921 to March 1922 Timekeeper, T. Crimmins Contr. Co., New York City, on street work. *TT 0.3: SP 0.3.* April to July 1922 Rodman with H. T. Lockwood, Brooklyn, N. Y., on subdivisions and surveys. *TT 0.2: SP 0.2.* July to Sept. 1922 Rodman, Raymond Concrete Pile Co., New York City, ran level party on foundations for a warehouse. *TT 0.1: SP 0.1.* Oct. 1922 to Sept. 1925 Job Acct. to Acting Supt., Turner Constr. Co., New York City, time, material, accounting, lines, grades, placing reinforcing steel, co-ordinating subcontractors on industrial buildings, a hotel and a silo job. *TT 2.7: SP 0.3: P 2.4: RC 0.8.* Sept. to Nov. 1925 Field Engr., White Constr. Co., New York City, on lines, grades and placing reinforcing steel on addition to export warehouse of Vacuum Oil Co. plant, Paulsboro, N. J. *TT 0.2: P 0.2.* Dec. 1925 to Nov. 1927 Field Engr. and Supt. with Spencer, White & Prentis, on building examinations, settlement levels, lines, grades, reinforcing steel on Tubo steel foundations and Pretest underpinning. *TT 1.9: P 1.9: RC 0.9.* Nov. 1927 to July 1928 Field Engr., Aronberg-Fried Co., Inc., on lines, grades and supervision of subcontracts and tenant layouts in Fox Theatre and Professional Bldg., Brooklyn, N. Y. *TT 0.7: P 0.7.* July to Dec. 1928 Shift Engr. (nights), Hart & Early Co., Inc., New York City, on location of work to accommodate new work in altering Union Sq. Station, B. M. T. Lines. *TT 0.5: P 0.5.* *TT 10.6: SP 0.9: P 9.7: RC 1.7.* Refers to F. N. Benedict, L. S. Homer, H. T. Immerman, E. A. Prentis, Jr., C. H. Schwertner, L. White.

FOR TRANSFER

FROM THE GRADE OF ASSOCIATE MEMBER

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(9) **ALLTON, ROBERT ADAMS,** Assoc. M., 143 Sherman Ave., Columbus, Ohio. (Elected April 19, 1920.) (Age 36. Born Nashua, N. H.) 1913 B. S., Mass. Inst. Tech. *TT 4: P 4.* June to Dec. 1913 Inspecting Engr., New York State Dept. of Health, Albany, N. Y., inspecting and reporting on sanitary condition of summer resorts, municipal water supplies, etc. *TT 0.5: P 0.5.* Jan. 1914 to June 1916 Asst. Engr., and Nov. 1916 to May 1917 and March to Dec. 1919 Prin. Asst. Engr., with Pearce & Greeley, Hydr. and San. Engrs., Chicago, Ill., on design, construction and testing-station operation, for water supply, sewerage, sewage-treatment and refuse-disposal projects. *TT 3.8: P 3.8: RC 3.3: D 2.8.* June to Nov. 1916 Sergeant, Battery D, 1st Illinois Field Artillery, Federal Service on Mexican Border, and May 1917 to March 1919 Capt. and Major, Field Artillery, U. S. Army, being Capt., Headquarters Co., 331st Field Artillery and Asst. Director, Dept. of Gunnery, School of Fire, Ft. Sill, Okla. *TT 2: SP 0.2: P 1.8: RC 1.8.* Jan. 1920 to Sept. 1921 Asst. to Pres., Frank D. Chase, Inc., Industrial Engrs., Chicago, administration problems, etc. *TT 1.8: P 1.8: RC 1.8.* Feb. 1923 to Dec. 1927 Designing Engr., Div. of Sewerage, Dept. of Public Service, Akron, Ohio, in charge of contract plans and specifications for sewage-treatment plant

(33 000 000 gal. daily) and sewers (over 40 miles). *TT 4.8: P 4.8: RC 4.8: D 4.8.* Jan. 1928 to date Sewage Disposal Engr., Div. of Eng. and Constr., Dept. of Public Service, Columbus, Ohio, being Engr.-in-Chg. of design and construction of sewage-treatment plant, pumping station, etc. for treatment and disposal of sewage. *TT 1.2: P 1.2: RC 1.2: D 1.2.* *TT 18.1: SP 0.2: P 17.9: RC 12.9: D 8.8.* Refers to F. D. Chase, H. P. Eddy, S. A. Greeley, J. H. Gregory, T. Horton, L. Pearce, C. M. Spofford, F. H. Waring.

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(1) **CASH, HENRY**, Assoc. M., 1026 President St., Brooklyn, N. Y. (Elected Aug. 31, 1925.) (Age 40. Born New York City.) Licensed Prof. Engr. and Land Surveyor, New York State. 1911 B. S. in C. E., and 1921 C. E., Cooper Union. 1926 LL.B., Brooklyn Law School. 1927 admitted to New York State Bar. June 1908 to May 1913 with Public Service Comm., New York, first as Axeman, then Rodman acting as Instrumentman on subway construction, final estimates, etc., and after Jan. 1912 Jun. Engr. in charge of survey party on subway construction. *TT 3.2: SP 1.8: P 1.4: RC 1.4.* May 1913 to Jan. 1915 with State Engr. and Surveyor, Albany, N. Y., until March 1914 as Leveler, directing party on canal improvement, involving responsible charge of hydrographic and triangulation work, then Bridge Designer, on highway bridges, movable dams, lock gates, retaining walls, etc., and on inspection. *TT 1.6: P 1.6: RC 0.8: D 0.8.* April 1915 to May 1916 Jun. Engr., Public Service Comm., New York, directing party on elevated railroad construction and on contract and specifications for engineering structures. *TT 1.1: P 1.1: RC 1.1.* May 1916 to March 1917 Draftsman, U. S. Navy Yard, Brooklyn, N. Y., on structural design for battleships and on arming of merchant ships. *TT 0.9: P 0.9: D 0.9.* March 1917 to date with Bureau of Buildings, Manhattan, until Jan. 1920 as Engr. Inspector on examination of buildings as to safety, compliance with building laws, etc., and filing reports and recommendations for removal of structural hazards; since Jan. 1920 Asst. Engr. on examination of plans, checking designs for skyscrapers, theatres, grandstands, coal pockets, etc., and covering all types of construction, passing upon plans and designs; at times acted as Legal Expert, interpreting building laws. *TT 12: P 12: RC 2.8: D 9.2.* *TT 18.5: SP 1.8: P 17: RC 6.1: D 10.9.* Refers to M. L. Kaufman, M. Miller, R. E. Moss, H. I. Oser, H. H. Snyder, W. H. Van Gleson.

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(15) **HALPERN, MICHAEL**, Assoc. M., P. O. Box 712, Port Arthur, Tex. (Elected Oct. 14, 1919.) (Age 36. Born New York City.) 1914 B. S. in C. E., N. Y. Univ. *TT 4: P 4.* May to Oct. 1914 Rodman, until July with New York State Barge Canal, then with New York State Conservation Comm. *TT 0.3: SP 0.3.* Nov. 1914 to June 1916 Jun. Asst. Engr., New York City Subway construction. *TT 0.9: SP 0.9.* June 1916 to date with The Texas Co., as follows: June 1916 to Jan. 1917 Asst. Engr., Bayonne, N. J.; Jan. 1917 to Feb. 1921 Engr. in charge of construction and maintenance, Bayonne Terminal, consisting of reinforced concrete factory, pipe lines, tanks, power-house, concrete dock, stone bulkheads, etc. (over \$1 000 000); Feb. 1921 to Feb. 1923 Asst. Supt., Providence (R. I.) Terminal, operations, construction and maintenance of plant (approx. 40 acres); Feb. 1923 to June 1925 Supt., Marcus Hook (Pa.) Terminal and Asphalt Refinery, in charge of operations, construction and maintenance; June 1925 to June 1926 Acting Supt., Port Neches (Tex.) Asphalt Refinery, in charge of operations, construction, engineering, etc.; June 1926 to June 1928 Auditor of Operations, Refining Dept. special work involving operating and engineering problems in reference to petroleum refining; since June 1928 Asst. Supt., Port Arthur (Tex.) Works Refinery, in direct charge of all construction, maintenance and engineering, including supervision of construction, etc. (several million dollars). *TT 12.1: SP 0.2: P 11.9: RC 11.9: D 4.7.* *TT 17.3: SP 1.4: P 15.9: RC 11.9: D 4.7.* Refers to P. Beall, H. Henderson, W. H. Kershaw, W. C. Mundt, C. Steiner.

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(13) **HEYWOOD, GENE BRYANT**, Assoc. M., Camp 2, Quincy, Cal. (Elected Junior June 16, 1919; Assoc. M. Oct. 12, 1925.) (Age 32. Born Hanford, Cal.) 1918 B. S. in Civ. Eng., Throop Coll. Tech. (Cal. Inst. Tech.). *TT 4: P 4.* Summer 1915 Chairman, City Engr.'s Office, Pasadena, Cal.; Rodman, California State Highway Comm. Summer 1916 with Frank Graves & Son on reinforced concrete building construction. Summer 1917 engineering inspection in Alaska, being Asst. to Geologist, M. L. W. Gold Min. Co., Alaska, on hydraulic problems. April to June 1918 Erector, Bethlehem Shipbuilding Corporation, steel fabrication and erection. *TT 0.1: SP 0.1.* June 1918 to Feb. 1924 with U. S. Army, until Oct. 1918 as Private, 1st Engrs. Training and Replacement Regt., Washington, D. C., and Officers' Training Camp, Camp Humphreys, then 2d Lieut., after Feb. 1919 with Engr. Officers Reserve Corps. *TT 0.4: SP 0.2: P 0.2.* Feb. 1919 to Aug. 1925 with Southern California Edison Co., Kern River, No. 3 project, as follows: Feb. to June 1919 Chairman; June 1919 to Jan. 1920 Chf. of Party on surveys for power house, pipe lines, tunnels, etc.; Jan. 1920 to June 1921 Asst. Engr. in charge of field engineering, inspection and field

drafting on lower end of project, comprising two tunnels, siphons, pressure flume, forebay, penstocks and power house; June 1921 to Nov. 1922 Designer, Gen. Office, on special investigation and reports, hydrographic and power studies, preliminary layout of hydro projects; Nov. 1922 to March 1923 on Big Creek No. 3 project in charge of inspection and experimental concrete work on diversion dam and intake; March 1923 to Aug. 1925 Senior Designer, Gen. Office, Florence Lake Dam, experimental studies on concrete, power studies, dam design and investigation and special reports. *TT 6.3: SP 0.1: P 6.2: RC 3.8: D 1.4.* Aug. 1925 to date Asst. to W. A. Brackenridge, Cons. Engr. for First Securities Co., Underwriters on Bucks Creek Project of Feather River Power Co.; preparation and approval of plans, specifications, contracts and estimates, construction of project, etc. *TT 3.5: P 3.5: RC 3.5: D 3.2. TT 14.3: SP 0.4: P 13.9: RC 7.3: D 3.6.* Refers to W. A. Brackenridge, H. W. Dennis, J. D. Galloway, L. R. Jorgensen, A. B. Pierce, F. Thomas.

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(5) **HINGSBURG, FREDERICK CHARLES**, Assoc. M., Care, Bureau of Lighthouses, Washington, D. C. (Elected May 31, 1916.) (Age 39. Born Long Island City, N. Y.) 1909 B. E., and 1913 C. E., Cooper Union Inst. *TT 4: P 4.* 1909 to 1910 Structural Steel Draftsman with Purdy & Henderson on office building construction. *TT 0.5: SP 0.5.* 1910 to March 1911 Jun. Asst., New York State Public Service Comm., on field work, line and grade, layouts, monthly estimates, etc., on construction of Fourth Ave. Subway, Brooklyn. *TT 0.5: SP 0.5.* March 1911 to date with Bureau of Lighthouses, engaged as follows: March 1911 to March 1912 Aid, inspected and tested materials at mills for construction of buoys and ships and supervised construction of dwellings for Staten Island light station (\$19 000) and reinforced concrete power house at general depot (\$20 000); March 1912 to Jan. 1916 Asst. Supt., Third Lighthouse Dist., designed and supervised construction of wharves, bulkheads, shore protection works; Jan. to June 1916 Asst. Supt., Eighth Lighthouse Dist., designed and prepared specifications for rebuilding lighthouse structures; July 1916 to Nov. 1917 in charge of construction of Navassa Island (West Indies) light station (\$125,000); Jan. 1918 to Dec. 1920, Supt. of Lighthouses, San Juan, Porto Rico, in charge of Ninth Lighthouse Dist. and responsible for all aids to navigation, upkeep of lighthouses, buoys and lighthouse property in American waters of West Indies, designed and built Pt. Borinquen light station and designed Pt. Jiguero light station; Jan. 1921 to Jan. 1925 First Asst. Supt., Fifth Lighthouse Dist., in charge of engineering construction and upkeep of lighthouse property; Jan. 1925 to July 1926 Supt. of Lighthouses on general duty; general inspection of vessels, floating aids and lighthouses throughout waters of United States, reporting to Commr. of Lighthouses on efficiency of Lighthouse Service, upkeep and replacement of ships, adequacy and needed improvements in aids to navigation and management of Lighthouse Service affairs; July 1926 to date Chf. Engr., Airways Div., Dept. of Commerce, responsible for establishing and maintaining lighted air ways and providing weather service, radio broadcast stations and radio direction for airplanes on civil airways. *TT 17.6: P 17.6: RC 10.6: D 5.9. TT 22.6: SP 1: P 21.6: RC 10.6: D 5.9.* Refers to H. B. Bowerman, W. W. Demeritt, F. P. Dillon, F. A. Muth, G. R. Putnam.

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(2) **HOLMGREN, RICHARD SIGFRID**, Assoc. M., 29 Daniels St., Arlington, Mass. (Elected June 1, 1925.) (Age 33. Born Worcester, Mass.) 1920 B. S., Mass Inst. Tech. *TT 4: P 4.* June 1914 to Sept. 1915 Chainman with Sloan, Huddle, Fenstle & Freeman, on railway valuation. *TT 0.6: SP 0.6.* Dec. 1920 to May 1921 and April 1923 to July 1925 with L. H. Shattuck, Inc., first as Asst. Engr. on study of, report on, and recommendations for sewerage system extensions of Manchester, N. H., and after April 1923 Asst. Engr. on design and construction of hydro-electric station and three storage reservoirs, also reports and estimates on other projects. *TT 2.6: SP 0.1: P 2.5: RC 2.3: D 1.2.* June to Sept. 1921, Jan. to April 1922 and Jan. to March 1923 Designer, Holyoke Water Power Co., on design of water wheel and boiler installation and power-house extension; also design of steam turbine foundation and piping layout in station extension, part of time in charge of construction; also prepared preliminary layouts and estimates on two proposed hydro-electric stations. *TT 0.9: P 0.9: RC 0.2: D 0.7.* Aug. 1925 to July 1926 Res. Engr. with C. T. Middlebrook, on construction of hydro-electric station at Rainbow Falls, Ausable Chasm, N. Y. *TT 0.9: P 0.9: RC 0.9.* July to Nov. 1926 Asst. Engr. with Robert E. Horton, in charge of field parties on surveys of reservoir sites for Albany water supply, also some report and experimental work. *TT 0.4: P 0.4: RC 0.4.* Dec. 1926 to March 1928 Asst. Engr. Metropolitan Dist. Water Supply Comm., on studies and design of structures for new Boston water supply from Ware and Swift Rivers. *TT 1.3: P 1.3: RC 1.3: D 0.8.* July to Nov. 1920 Transitan and Chf. of Party on surveys for 1 400-acre water-supply reservoir, Oct. to Dec. 1921 and May to Dec. 1922 Field Engr. in charge of layout and inspection on construction of dams, dike and roads for reservoir, and April 1928 to date Asst. Engr. on

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studies for report of flood control for Vermont, also other reports and design, including water supply pumping station utilizing water power, all for H. K. Barrows. *TT 1.9: SP 0.2: P 1.7: RC 1.7: D 0.3. TT 12.6: SP 0.9: P 11.7: RC 6.8: D 3.* Refers to R. E. Barrett, H. K. Barrows, R. E. Horton, K. R. Kennison, C. T. Middlebrook, P. A. Shaw, G. G. Shedd, F. E. Winsor.

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(1) **KOLB, HENRY JACOB**, Assoc. M., 385 Flatbush Ave. Extension, Brooklyn, N. Y. (Elected Junior Feb. 3, 1903; Assoc. M. April 4, 1906.) (Age 51. Born Boston, Mass.) July 1894 to Feb. 1897 with C. E. C. Breck, Boston, surveying and topographical work, also foundations for buildings and street railway work. March 1897 to Oct. 1898 with F. P. Hall, Boston, on street railway engineering. *TT 2: SP 2. Nov. 1898 to Aug. 1899 with H. T. Whitman, Quincy, Mass., on municipal work. TT 0.4: SP 0.4. Aug. 1899 to Aug. 1901 with New York, New Haven & Hartford R. R. Co., Boston, on maintenance-of-way engineering. TT 1: SP 1. Aug. to Dec. 1901 Res. Engr. of Constr., Kansas City, Mexico & Orient R. R. TT 0.5: P 0.5: RC 0.5. Dec. 1901 to Feb. 1903 Asst. Engr., Pennsylvania Steel Co., Steelton, Pa., on enlargement of plant. TT 1.2: P 1.2: RC 1.2: D 1.2. Feb. 1903 to April 1904 with Terminal Engr., New York Central & Hudson River R. R., on design of improvements at Grand Central Terminal, New York City. TT 0.6: SP 0.6. April 1904 to April 1913 Chf. Draftsman and Asst. Engr., Brooklyn (N. Y.) Rapid Transit Co. TT 9: P 9: RC 9: D 9. April 1913 to Jan. 1920 Engr. of Design, and Jan. 1920 to Aug. 1923 Asst. Chf. Engr. of Way and Structure, New York Municipal Ry. Corporation, Brooklyn. TT 10.3: P 10.3: RC 10.3: D 10.3. Aug. 1923 to date Chf. Engr. of Way and Structure, Brooklyn-Manhattan Transit Corporation, Brooklyn. TT 5.5: P 5.5: RC 5.5: D 5.5. TT 30.5: SP 4: P 26.5: RC 26.5: D 26. Refers to F. Auryansen, R. S. Buck, J. V. Davies, D. G. Edwards, J. B. French, E. Klapp, G. L. Lucas, R. Ridgway.*

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(10) **MAULDIN, EARLE**, Assoc. M., P. O. Box 423, Charlotte, N. C. (Elected Jan. 13, 1919.) (Age 43. Born Greenville, S. C.) 1905 A. B. Furman Univ., Greenville, S. C. June 1906 to April 1913 and June 1919 to March 1925 with J. E. Sirrine & Co., Greenville, S. C., until April 1913 on design and layout of industrial plants, road and street work, railroads, water supply, sewage disposal, village layout, etc., design, supervision, 5 years in responsible charge; after June 1919 Asst. to Chf. Engr., design, supervision of drafting room, preparation of schedules, estimates and specifications. *TT 12.3: SP 0.3: P 12: RC 9.7: D 8.7. April 1913 to Sept. 1918 Engr., R. J. R. Tobacco Co., Winston-Salem, N. C., on design and construction of manufacturing buildings, power plants, storage sheds; alterations, repairs and additions, designed and built model extension to city, with water, sewers, lights, improved streets, designed and built first allotment of forty model houses. TT 5.4: P 5.4: RC 5.4: D 5.4. Sept. 1918 to June 1919 Prin. Asst. to Engr. in charge on construction of Camp Bragg (Artillery, 40 000 troops) Fayetteville, N. C.; had direct charge of buildings and assisted in design of water-supply and sewer systems, sewage-disposal plant, roads, railroads, etc. TT 0.7: P 0.7: RC 0.7: D 0.7. March to Nov. 1925 Vice-Pres. and Gen. Mgr. for W. M. Welch, Inc., Gen. Contrs., Greenville, S. C. reinforced concrete construction, etc. TT 0.6: P 0.6: RC 0.6. Nov. 1925 to Jan. 1927 Engr. and member of firm, Welch, Mauldin & Sneed, Gen. Contrs., Plant City, Fla., estimating, scheduling, and buying. TT 1.2: P 1.2: RC 1.2: D 0.5. Jan. 1927 to date Engr., Park Mfg. Co., Charlotte, N. C., supervision of construction, design. TT 2: P 2: RC 2: D 2. TT 22.2: SP 0.3: P 21.9: RC 19.6: D 17.3. Refers to W. D. Dent, H. L. Hagerman, T. K. Legare, W. S. Lindsay, Jr., H. T. Poe, Jr., J. E. Sirrine, J. T. Wardlaw.*

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(3) **MILKOWSKI, VICTOR JOHN**, Assoc. M., 191 Oswego St., Baldwinsville, N. Y. (Elected Junior Nov. 28, 1916; Assoc. M. June 18, 1918.) (Age 41. Born in Russian Poland.) 1910 Ph.B., Sheffield Sci. School. 1 year graduate student in Eng., Yale Univ. *TT 4: P 4. June 1911 to Feb. 1912 and May to Dec. 1912 Rodman, Jos. Stewart & Co., Baldwinsville, N. Y. TT 0.6: SP 0.6. June 1914 to July 1915 Eng. Draftsman and Asst. Standard Oil Co. of New Jersey, on designs for docks, warehouses, etc., also (3 months) in charge of field party on sewers, buildings, etc. TT 0.6: SP 0.6: D 0.6. May 1917 to Dec. 1918 2d Lieut., Engrs., U. S. Army, with combat engineer troops, 6 months in France. TT 0.8: SP 0.8. Feb. to May 1912 and Dec. 1912 to June 1914 Eng. Draftsman and Asst. on designs for hydraulic dredges, centrifugal pumps and engines, and (about 6 months) testing centrifugal pumps and Asst. to Constr. Engr. in field, July 1915 to May 1917 Asst. to Engr. in Chg. of Dredging Dept. and Constr. Engr. on design and construction of hydraulic dredges, and Jan. 1919 to date Engr. in Chg. of Dredging Dept., on design, safe and construction of hydraulic dredges and pumping machinery, all for Morris Machine*

Works, Baldwinsville, N. Y. *TT* 12.8: *SP* 0.9: *P* 11.9: *RC* 11.9: *D* 3.4. *TT* 17.8: *SP* 2.9: *P* 14.9: *RC* 11.9: *D* 4. Refers to H. B. Brewster, C. E. Curtis, G. D. Holmes, W. R. McCann, L. Mitchell, E. F. Robinson, S. D. Sarason, C. W. Sturtevant.

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(1) **MOSS, EARLE BRISTOL**, Assoc. M., Alger Court, Bronxville, N. Y. (Elected Nov. 21, 1921.) (Age 43. Born Lewiston, N. Y.) 1909 C. E., Syracuse Univ. *TT* 4: *P* 4. Dec. 1909 to March 1913 Detail Draftsman and Field Engr., Union Carbide Co., Niagara Falls, N. Y., on plant layout and equipment design, surveying and supervising construction. *TT* 3.2: *P* 3.2. March 1913 to Feb. 1916 Engr., City Engr.'s office and Jan. 1924 to March 1925 City Engr., Niagara Falls, N. Y., on water supply, sewage disposal, street paving, street repair, parking, zoning and building control, etc. *TT* 4: *P* 4: *RC* 1.1: *D* 2.9. June 1920 to March 1921 Engr., U. S. Engr. Office, Buffalo Dist., supervising heavy concrete breakwall construction, Dunkirk Harbor, Lake Erie, etc. *TT* 0.7: *P* 0.7: *RC* 0.5. March 1921 to Dec. 1923 Appraiser, Bureau of Assessment and Taxation, Niagara Falls, N. Y., organized Appraisal Dept. and made survey of all real property within city. *TT* 2.7: *P* 2.7: *RC* 2.7. Feb. 1916 to Dec. 1919 and March 1925 to date with Elec. Furnace Products Co., Ltd. (affiliate of Union Carbide Co.), at Sauda, Ryfylke, Norway, until March 1925 as Constr. Engr., assisting Chf. Engr. on construction of large electric furnace plant and model workmen's town, and after March 1925 Special Engr., investigated water-power developments in Norway and acted in consulting capacity in responsible charge of design and construction of reinforced concrete dock for ocean steamships and enlargement of plant; involving design of heavy structural steel and large reinforced concrete buildings; surveyed and appraised an alloy manufacturing plant, and had responsible charge of design of unloading plant for installation in South Africa; since Sept. 1927 Chf. Engr. in responsible charge of enlargement of industrial plant (50 000 h. p. addition); consulting work for various mining companies. *TT* 7.8: *P* 7.8: *RC* 6.6: *D* 1. *TT* 22.4: *P* 22.4: *RC* 10.9: *D* 3.9. Refers to O. D. Dales, L. L. Davis, A. Gundersen, L. J. Hayes, H. L. Noyes, R. N. Shepard.

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(2) **PERRY, HORACE BURR**, Assoc. M., 143 Pleasant St., South Weymouth, Mass. (Elected June 16, 1924.) (Age 35. Born New Haven, Conn.) 1916 Ph. B., and 1916 to 1917 graduate work, Sheffield Scientific School, Yale Univ. *TT* 3.5: *P* 3.5. Jan. 1917 to April 1919 Instrumentman, Chf. of Party and Chf. Draftsman, Bureau of Yards and Docks, Submarine Base, New London, Conn., on surveys, mapping, topography, track and street work, soundings, line and grade work for buildings, wharves, sewers, etc., plotting cross-sections, monthly estimates, studies and layouts of main distribution system, sewers, water lines, railroad tracks and streets, design and check of reinforced concrete retaining walls, footings and foundations, distribution trenches, manholes, etc., and structural steel design for buildings. *TT* 2.1: *SP* 0.2: *P* 1.9: *RC* 1.9: *D* 1. April 1919 to date with Jackson & Moreland, Boston, Mass., engaged as follows: Res. Engr. on town planning in South covering survey and mapping of town, layout and supervision of construction of streets and housing; Asst. Engr. on design of centering and form work for Bethlehem (Pa.), Springfield and Haverhill (Mass.) Bridges, structural design of hydraulic power house and dam in New Hampshire, and study of structural features of 220-kv. transmission line; in charge of design and field supervision of construction of underground conduit and manholes for electric distribution system in city in Massachusetts, and of design, specifications and supervision of plans for 1 000 000-gal. concrete reservoir; Asst. Engr., Res. Engr. and Engr. in Chg. of structural design, specifications and plans covering construction of power houses, substations, warehouses and glass-factory buildings, etc.; appraisal work on Toronto St. Ry. property, Cities Service Co., properties and (during past 2 years) in charge of inventory and pricing of public property (approx. \$200 000). *TT* 9.8: *P* 9.8: *RC* 8: *D* 6.5. *TT* 15.4: *SP* 0.2: *P* 15.2: *RC* 9.9: *D* 7.5. Refers to H. L. Bowman, E. H. Cameron, F. M. Carhart, A. B. Hill, D. C. Jackson, E. S. Nettleton, J. C. Tracy.

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(11) **STONE, ORMOND ALLISON**, Assoc. M., 606 South Hill St., Los Angeles, Cal. (Elected Aug. 9, 1920.) (Age 37. Born Chicago, Ill.) 1910-1913 student, Univ. of Virginia. *TT* 1.5: *P* 1.5. Sept. 1913-Jan. 1914 Timekeeper, Nov. 1914-April 1915 Steel Foreman, and May 1915-Feb. 1916 Steel Foreman and Bookkeeper, Putnam Stone Constr. Co., on bridge construction. *TT* 1.1: *SP* 0.6: *P* 0.5: *RC* 0.5. Feb.-April 1914 Foreman in charge of concrete construction, and March-June 1916 Calculator on appraisal, Los Angeles County. *TT* 0.5: *SP* 0.2: *P* 0.3: *RC* 0.3. May-Oct. 1914 with Matthew Slavin as Steel Foreman on 9-story reinforced concrete loft building. *TT* 0.5: *P* 0.5: *RC* 0.5. July 1916 to date with Olmsted & Gillilen, Civ. Engrs., Los Angeles, Cal., since 1922 as member of firm, in charge of design and construction of sewer, water and irrigation systems, streets and highways. *TT* 11.6: *SP* 1: *P* 10.6: *RC* 6: *D* 10.6. *TT* 15.2: *SP* 1.8: *P* 13.4: *RC* 7.3: *D* 10.6. Refers to E. R. Bowen, W. H. Code, F. Gillilen, L. C. Hill, R. A. Hill, F. H. Olmsted.

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(7) **TOLTZ, MAX ERNST ROBERT**, Assoc. M., 1212 Builders Exchange Bldg., St. Paul, Minn. (Elected Sept. 7, 1892.) (Age 71. Born Koeslin, Germany.) 1887 C. E., Royal Ban Akademie, Berlin, Germany. Doc. Eng., Ramsey Inst. Tech. TT 4: P 4. 1891 to 1894 Asst. Engr. designing bridges, 1894 to 1899 Bridge Engr., and 1899 to 1904 Mech. Engr. in charge of Motive Power Dept., Great Northern Ry. TT 13: P 13: RC 10: D 3. 1904 to 1907 Cons. Mech. Engr., in shops of Canadian Pacific Ry. and Erie R. R. and Vice-Pres. and Gen. Mgr., Manistee & Grand Rapids R. R. TT 3: P 3: RC 3. 1907 to 1911 in private practice on grain elevators (4 000 000 and 2 500 000 bu.), for Great Northern Ry., Superior, Wis., Western Maryland Ry. at Baltimore and Chicago and North Western Ry. at Milwaukee, Wis., iron-ore docks, concrete square and round bins, tank storage, etc., reports on electrification of G. N., Northern Pacific, Butte, Anaconda & Pacific and Chicago, Milwaukee & St. Paul Rys. TT 4: P 4. 1911 to July 1928 in private practice, until 1919 as Pres., Toltz Eng. Co., then Pres., Toltz, King & Day, Inc., on engineering and architectural work, designed steam and water power plants and factories, iron-ore docks for railroads, etc. TT 17: P 17: RC 17. July 1928 to date Cons. Engr. on low-temperature distillation of low-grade fuel, high-pressure locomotives, superheated steam, grade separation of C. M. & St. P. Ry. in Minneapolis, as to damages to industries. TT 0.6: P 0.6. TT 41.6: P 41.6: RC 30: D 3. Refers to B. Blum, W. L. Darling, G. H. Herrold, W. E. King, C. F. Loweth, H. E. Stevens, G. L. Willson.

FROM THE GRADE OF JUNIOR

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(1) **ANTONACCI, MICHAEL HENRY**, Jun., 230 North Thirteenth St., San Jose, Cal. (Elected March 15, 1926.) (Age 26. Born New York City.) 1924 A. B. in Civ. Eng. and 1926 C. E., Stanford Univ. TT 4: P 4. Summers 1921-1923 on design of paving plans, assessments and field work, and June 1924 to Jan. 1926 in responsible charge of construction of bridges with City of San Jose, Cal. TT 1.6: P 1.6: RC 1.6. Jan. to Oct. 1926 graduate student, and Oct. 1926 to April 1927 (part of time) Asst. Instructor, Stanford Univ. July 1926 to date with City of San Jose, until April 1927 (part of time) in charge of construction of bridges, then on design of paving and sewerage plans, etc. and since Nov. 1927 Engr., City Planning Comm. TT 2.4: SP 0.3: P 2.1: RC 2.1: D 0.3. TT 8: SP 0.3: P 7.7: RC 3.4: D 3. Refers to C. B. Goodwin, S. P. Laverty, C. D. Marx, L. B. Reynolds, O. C. Tretten, C. B. Wing.

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(13) **CLYDE, HARRY SCHLEY**, Jun., 361 Hobart St., Oakland, Cal. (Elected Dec. 5, 1927.) (Age 27. Born Springville, Utah.) 1922 B. S., Utah Agri. Coll. 1924 M. S. in Civ. Eng., Univ. of Cal. TT 4: P 4. June to Sept. 1922 Rodman, U. S. Bureau of Public Roads; Sept. to Dec. 1922 Chainman, Spring Canyon Coal Co., Storrs, Utah. TT 0.3: SP 0.3. Jan. to May 1923 and Aug. 1923 to May 1924 graduate student, Univ. of California. May to Aug. 1923 Inspector, U. S. Engrs., on Fremont Weir for flood control of Sacramento River. TT 0.1: SP 0.1. May to July 1924 Draftsman, Street Dept., Oakland, Cal. TT 0.1: SP 0.1. July 1924 to date Asst. Engr., East Bay Municipal Utility Dist., engaged as follows: July 1924 to Aug. 1925 on preliminary estimates for source of water supply, transit work and plotting detailed topography and alignment; Aug. 1925 to Aug. 1926 in charge of field party on location surveys for aqueduct line, property ties for right-of-way, and detailed topography, including stadia survey of Mokelumne River; Aug. 1926 to July 1928 in charge of field parties on construction of Mokelumne River aqueduct, Central Div., including 40 miles of 61-in. to 65-in. steel pipe (16 miles on piling, three river crossings); since July 1928 in charge of office work on pipe grades, laying schedule for pipe manufacture, progress estimates and inspection work on concrete structures for Sequoia and Wildcat Aqueducts, City Div. (10 miles, 48-in. and 54-in. concrete pipe), also in charge of work on record drawings for Central Div. TT 4: SP 0.6: P 3.4: RC 3.4. TT 8.5: SP 1.1: P 7.4: RC 3.4. Refers to J. G. Bastow, A. P. Davis, B. W. Goodenough, J. S. Longwell, J. Munn, R. B. West.

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(13) **CONNELLY, JOHN LEO**, Jun., 5208 Trask St., Oakland, Cal. (Elected Aug. 30, 1926.) (Age 31. Born Lonaconing, Md.) 1917 B. S. in C. E., St. Marys Coll., Oakland, Cal. TT 4: P 4. June 1917 to Aug. 1918 and Sept. 1921 to Nov. 1925 with California Highway Comm., until Aug. 1918 as Eng. Asst., acting as Rodman, Chainman, Timekeeper and Asst. to Res. Engr. on construction, etc., and after Sept. 1921 Timekeeper, Asst. Res. Engr., Foreman, Supt. of Constr. and Res. Engr., Div. No. 2. TT 4.3: SP 1.1: P 3.2: RC 1. Aug. 1918 to Aug. 1920 Inspector and Chf. of Party, California State Reclamation Board, about 2 months on location survey, then on construction of flood-control work. TT 1.9: SP 0.1:

P 1.8: RC 1. Sept. to Nov. 1920 Inspector on concrete dam construction, Snow Mountain Power Co., San Francisco. TT 0.1: SP 0.1. Nov. 1920 to April 1921 Concreteman on building construction, J. L. McLaughlin Co., San Francisco. TT 0.2: SP 0.2. April to Sept. 1921 on private work. TT 0.2: P 0.2. Nov. 1925 to March 1926 with Board of Fire Underwriters of the Pacific, San Francisco, as Inspector on investigation of buildings. TT 0.3: P 0.3. March 1926 to date Timekeeper, Foreman and Supt. of Constr. with Barrett & Hilp, San Francisco, on building construction and general contracting. TT 2.5: SP 0.5: P 2: RC 1.1. TT 13.5: SP 2: P 11.5: RC 3.1. Refers to H. S. Comly, F. B. Cook, Jr., E. L. Cope, C. S. Donald, H. K. Ward.

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(13) HUBER, EARL RAYMOND, Jun., 1304 Crocker First National Bank Bldg., San Francisco, Cal. (Elected Oct. 21, 1924.) (Age 27. Born Zamora, Cal.) 1924 B. S., Coll. of Civ. Eng., Univ. of Cal. TT 4: P 4. Summers 1921-1923 Rodman and Chainman, Pacific Gas & Elec. Co., on hydro-electric developments. May to Nov. 1924 Eng. Asst., Nevada California Power Co., concrete inspection on hydro-electric developments, Poole plant and Gem dam. TT 0.6: P 0.6. Dec. 1924 to May 1927 with Pacific Gas & Elec. Co., until Aug. 1925 as Inspector on tunnel lining, Pit No. 3 power plant, then Transltman on hydro-electric surveys, and after May 1926 on concrete inspection and testing, Pit No. 4 dam. TT 2.5: P 2.5. June 1927 to date with W. L. Huber, Cons. Civ. Engr., San Francisco, Cal., as Chf. of Party on hydro-electric field surveys, estimates and reports, and on design and supervision of structural features of buildings (steel frame and reinforced concrete). TT 1.8: P 1.8: RC 1.6: D 1.2. TT 8.9: P 8.9: RC 1.6: D 1.2. Refers to H. D. Dewell, F. H. Fowler, G. C. Green, W. L. Huber, E. M. Knapik, I. C. Steele, E. J. Waugh.

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(11) HURD, HAROLD WALLER, Jun., Box 582, Albuquerque, N. Mex. (Elected March 14, 1927.) (Age 31. Born Paris, Mo.) 1921 B. S. in M. E., Mo. School of Mines. TT 4: P 4. Summer 1917 Inspector on concrete paving, and Feb. 1921 to Aug. 1925 Jun. Highway Engr., Illinois State Highway Dept., Springfield and Carbondale, Ill., drafting, estimate checking, etc., and (after Oct. 1921) drafting, culvert design, estimating, instrument work, inspecting paving, grading and bridges, and Res. Engr. on grading, culverts and bridges. TT 3.6: SP 0.6: P 3: RC 2. Jan. 1919 to Jan. 1920 Asst. County Engr., Monroe County, Mo., acting as Transltman and Draftsman on Federal Aid location. TT 0.5: SP 0.5. Aug. 1925 to Feb. 1927 with Florida State Road Dept., until Dec. 1925 as Draftsman on location of Tamiami Trail, Ft. Pierce, then Res. Engr. on two grading and two bridge projects, also inspection on a St. Johns County project. TT 1.4: SP 0.2: P 1.2: RC 1.2. March 1927 Draftsman, U. S. Bureau of Reclamation, El Paso, Tex. April 1927 to date Office Engr., New Mexico State Highway Dept., Dist. No. 3, Albuquerque, N. Mex., in charge of district office. TT 1.8: P 1.8: RC 1.8. TT 11.3: SP 1.3: P 10: RC 5. Refers to W. C. Davidson, A. Diefendorf, E. G. Harris, E. R. Knight, L. C. Rockett.

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(7) KETCHUM, KARL EDWARD, Jun., 2189 Canton Ave., Detroit, Mich. (Elected July 12, 1926.) (Age 28. Born Detroit, Mich.) 1924 B. S. C. E., Univ. of Mich. TT 4: P 4. June 1923 to Feb. 1924 Sewer Inspector, Fordson, Mich., on monolithic concrete and precast concrete pipe sewer. TT 0.3: SP 0.3. June 1924 to June 1926 with Hoad, Decker, Shoecraft & Drury, Ann Arbor, Mich., as Res. Engr., on Royal Oak sewage-disposal plant and Plymouth, Mich., sewers and sewage-disposal plant and on design. TT 2: P 2: RC 1.5: D 0.3. June 1926 to date with Thos. D. Nolan, Contr., Detroit, as Estimator and Supt. on construction of sewers (open cut and tunnel) in Detroit and surrounding cities and villages, also for Wayne, Macomb and Oakland County Drains Comms. TT 2.8: P 2.8: RC 2.8. TT 9.1: SP 4.3: P 4.8: RC 4: D 0.3. Refers to R. A. Anderson, W. C. Hoad, E. H. Pate, E. C. Shoecraft, S. D. Strong.

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(8) KNAPPEN, THEODORE TEMPLE, Jun., Board of Trade Bldg., Cairo, Ill. (Elected Jan. 16, 1928.) (Age 28. Born Minneapolis, Minn.) 1920 Diploma, U. S. Mil. Acad., West Point, N. Y. 1922 C. E., Rens. Pol. Inst. TT 4: P 4. Jan. to June 1921 and June 1922 to March 1923 Lieut., U. S. Army, Camp Grant, Ill., on building construction and (1 month) Co. Commander, and after June 1922 with 6th Engrs., U. S. Army, Ft. Winfield Scott, San Francisco, being Instructor in summer training camps, on construction of roads, in charge of a survey, etc. TT 1.1: P 1.1: RC 0.2. March to June 1923 Engr., Duplex Constr. Equipment Co. TT 0.2: P 0.2. July to Oct. 1923 Contr. for construction of a store building, Burlingame, Cal. TT 0.3: P 0.3: RC 0.3. Nov. 1923 to Feb. 1924 Engr., Scales Hydraulic Mine. TT 0.3: P 0.3: RC 0.1. May to June 1924 Field Draftsman, Standard (Cal.) Lumber Co. TT 0.1: SP 0.1. Aug 1924 to Feb. 1925 Draftsman, Gordon Valley Project, City of Vallejo, Cal. TT 0.3: SP 0.3. Oct. to Nov. 1925 Asst. Engr.,

Great Western Power Co., on building valuation. *TT 0.2: P 0.2.* May to Sept. 1925 and Nov. 1925 to May 1928 with Fred H. Tibbetts, Chf. Engr., Nevada Irrigation Dist., until Sept. 1925 as Draftsman detailing, drawing plans and writing specifications; Dec. 1925 to March 1926 Asst. Engr. in charge of plans, Bowman-Spaulding conduit; April 1926 to Aug. 1927 Div. Engr. in charge of construction of diversion works and flume, Bowman-Spaulding conduit and Bowman concrete arch dam; Aug. to Oct. 1927 designing and preparing contract plans, Deer Creek storage dam; after Oct. 1927 Res. Engr., Van Giesen concrete diversion dam. *TT 2.9: SP 0.1: P 2.8: RC 2.2: D 0.2.* June to Aug 1928 Asst. Hydr. Engr., Hetch-Hetchy Water Supply, San Francisco, designing underground structures. *TT 0.2: P 0.2.* Sept. 1928 to date Associate Engr., U. S. Engr. Office, Memphis Dist., being Asst. to Officer in charge of first field area comprising work on river from Cape Girardeau to Missouri State Line (about \$3 000 000 annually) and since Jan. 1929 in charge of first field area. *TT 0.5: P 0.5: RC 0.5: D 0.5.* *TT 10: SP 0.7: P 9.3: RC 3.3: D 0.7.* Refers to E. E. Blackie, R. Matthew, L. W. Stocker, F. H. Tibbetts, R. G. Wadsworth, H. I. Wood.

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(1) SEELY, HOMER RUSSELL, Jun., 45 George St., Tenafly, N. J. (Elected Nov. 26, 1923.) (Age 31. Born Springfield, Mass.) 1919 C. E., Cornell Univ. *TT 4: P 4.* July 1919 to Feb. 1923 with Bethlehem (Pa.) Steel Co., until May 1920 as Draftsman detailing, Estimator on structural steel, and after Oct. 1920 Res. Engr. on erection of steel bridges and buildings. *TT 3.6: P 3.6: RC 2.4.* Feb. to June 1923 Draftsman, Berlin (Conn.) Constr. Co., detailing structural steel. *TT 0.3: P 0.3.* June 1923 to Sept. 1925 with Delaware River Bridge Joint Comm., until July 1924 as Draftsman on design and contract drawings, then Asst. Engr. on construction of main cables and erection of suspended structure, Delaware River Bridge. *TT 2.2: P 2.2: RC 1.2: D 1.* Sept. 1925 to date with Port of New York Authority, until Oct. 1928 as Draftsman, Designer and Asst. Engr. on design studies, Hudson River Bridge and Asst. to Engr. of Design on all work for two Arthur Kill Bridges, and since Oct. 1928 Asst. Engr. being Asst. to Engr. of Constr., Hudson River Bridge. *TT 3.3: P 3.3: RC 2.3: D 3.* *TT 13.4: P 13.4: RC 5.9: D 4.* Refers to W. J. Boucher, M. B. Case, C. E. Chase, A. Dana, L. M. Entekin, S. Hardesty, C. H. Mercer.

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(10) SHAPARD, WILLIAM ALLEN, Jr., Jun., 1006 McCall Bldg., Memphis, Tenn. (Elected Aug. 4, 1924.) (Age 30. Born Shelbyville, Tenn.) 1920 Ph. B., Sheffield Sci. School. 1928 M. S. in Civ. Eng., Yale Univ. *TT 4: P 4.* June 1920 to March 1923 with W. A. Shapard Lumber Co., Shelbyville, Tenn., business and building construction. *TT 1.4: SP 1.4.* March to Aug. 1923 Instrumentman, Alabama Power Co., Birmingham, Ala. *TT 0.2: SP 0.2.* Aug. 1923 to March 1925 detailing steel and estimating, Nashville (Tenn.) Bridge Co. *TT 1.6: P 1.6.* March to Sept. 1925 Materialman on construction, Tennessee Coal, Iron & R. R. Co., Fairfield, Ala. *TT 0.3: SP 0.3.* Sept. to Dec. 1925 with Davis, Ransom & Burton, Engrs., Ft. Myers, Fla., on office work for real-estate development. *TT 0.3: P 0.3.* Dec. 1925 to May 1926 Asst. Engr., M. S. Kice Developing Co., Ft. Myers, on real-estate development. *TT 0.5: P 0.5: RC 0.5.* July 1926 to Sept. 1927 Asst. Engr., Southern Cities Power Co., Chattanooga, Tenn., on hydraulic studies, power-plant estimates, transmission-line surveys and construction. *TT 1.2: P 1.2: RC 0.7.* Sept. 1927 to July 1928 graduate student, Yale Univ. Sept. 1928 to date with U. S. Engrs., Memphis, Tenn., as Asst. on hydraulic studies for Mississippi River flood control. *TT 0.4: P 0.4.* *TT 9.9: SP 1.9: P 8: RC 1.2.* Refers to F. E. Freeland, R. S. Kirby, W. A. K. Parkin, B. A. Ross, J. C. Tracy.

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(11) SMITH, ELMER LEWIS, Jun., 1975 West Ave., Pasadena, Cal. (Elected Oct. 21, 1924.) (Age 31. Born Melrose, Mass.) 1923 B. S. in C. E., Cal. Inst. Tech. *TT 4: P 4.* Summer 1914 Rodman and Chainman, and summer 1915 Laborer on construction of storm drains, etc., Eng. Dept., Pasadena, Cal. Summer 1918 Rodman, Transitman and Note-keeper, June 1919 to June 1920 Transitman, Aug. to Sept. 1921 Transitman and Inspector, and June to Sept. 1922 Asst. Res. Engr. on construction of concrete highway, all for California Highway Comm. *TT 0.5: SP 0.5.* June to Aug. 1920 Chf. of Party, Southern California Edison Co., on conduit, diversion dam and tunnel surveys. *TT 0.2: P 0.2: RC 0.2.* June 1922 to date Chf. of Party and Asst. Engr., Pasadena Water Dept., on topographic surveys of dam and reservoir sites in San Gabriel River and of 25-mile conduit line from San Gabriel River to Pasadena; Inspector on 10 000 000 gal. concrete-lined reservoir; at present on hydrographic studies of water supply. *TT 5.7: P 5.7: RC 5.7: D 1.* *TT 10.4: SP 0.5: P 9.9: RC 5.9: D 1.* Refers to T. D. Allin, W. W. Michael, S. B. Morris, R. V. Orbison, C. W. Sopp, F. Thomas.

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(2) **TREAT, ROBERT SPERRY**, Jun., P. O. Box 197, Kensington, Conn. (Elected March 16, 1925.) (Age 30. Born New Haven, Conn.) 1918 to 1921 student, Sheffield Scientific School. *TT 1.5: P 1.5.* Aug. 1917 to June 1918 Chairman, New York, New Haven & Hartford R. R. Co. *TT 0.4: SP 0.4.* June to Sept. 1918 Levelman in charge of party, Location Dept., U. G. I. Contr. Co., Philadelphia, Pa. Summer 1919 Transitman on surveys sewers, etc., Buck & Sheldon, Inc., Cons. Engrs., Hartford, Conn.; had charge of 10-in. pipe sewer construction. Summer 1920 with Charles A. Ferry, New Haven, Conn., as Transitman on completion of Yale Bowl, surveys, etc. July to Sept. 1921 with Connecticut State Forestry Service (Blister rust control), scouting and eradication work in new territory. *TT 0.2: SP 0.2.* June 1922 to Jan. 1926 with Buck & Sheldon, Inc., Cons. Engrs., Hartford, until April 1924 in Eng. Dept. as Transitman with survey party, inspecting sewers, buildings and water supply, and a school addition (gymnasium) for Farmington public school, New York-Connecticut state line survey and in charge of sewer construction in Farmington, Conn., and after April 1924 in Bldg. Dept., drawing plans for mill buildings and alteration work on store and warehouses, steel and concrete design for 10-story office and store building, warehouses, garages, etc. *TT 3.1: SP 0.3: P 2.8: RC 1.2: D 1.6.* Jan. 1926 to date Structural Steel Draftsman and Checker, Berlin Constr. Co., Steel Fabricators, on bridges, buildings, coal conveyors, hoppers, towers, etc., in charge of many contracts. *TT 3: P 3: RC 3.* *TT 8.5: SP 0.9: P 7.6: RC 4.5: D 1.6.* Refers to C. T. Bishop, H. R. Buck, C. F. Chase, G. B. Taylor, P. R. Williamson.

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(13) **WILBUR, LYMAN DWIGHT**, Jun., 512 Sixteenth St., Oakland, Cal. (Elected Oct. 10, 1921.) (Age 28. Born Los Angeles, Cal.) 1921 A. B., Stanford Univ. *TT 2: P 2.* June to Sept. 1921 Draftsman, Standard Oil Co. of California, plotting, tracing service and substations, laying out service stations. *TT 0.2: SP 0.2.* Sept. 1921 to Aug. 1924 successively Field Draftsman, Transitman and Asst. Engr., on Hetch Hetchy Project, City of San Francisco, made quantity estimates, field drawings, various surveys and designs of small structures for Hetch-Hetchy dam construction and Bay Crossing Div. pipe line. *TT 2.5: SP 0.5: P 2: RC 0.5: D 0.2.* Aug. 1924 to Jan. 1926 with Merced Irrigation Dist., Exchequer Project, as Designer of structural parts of power house (reinforced concrete), spillway gates, etc., for dam and irrigation works. *TT 1.4: P 1.4: RC 1: D 1.4.* Jan. 1926 to date Designing Engr., East Bay Municipal Utility Dist., Mokelumne Project, designed outlet works for Lafayette reservoir, spillways, gate chambers, pipe lines and accessories, reinforced concrete and steel structures, wrote specifications for pipe line, designed and estimated buildings. *TT 3.2: P 3.2: RC 2: D 2.5.* *TT 9.3: SP 0.7: P 8.6: RC 3.5: D 4.1.* Refers to A. P. Davis, E. L. Driggs, F. W. Hanna, T. L. E. Haug, C. D. Marx, J. Munn, F. T. Oakley, C. R. Rankin, R. White, A. J. Wiley.

The Board of Direction will consider the applications in this list not less than thirty days after the date of its issue.